UN environment programme | Evaluation Office

Terminal Evaluation of the UNEP Project

"Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa" - PIMS ID 2062

(2019-2022)

UN environment programme

Evaluation Office of the United Nations Environment Programme

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'Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa'
PIMS ID 2062
April 2024

Acknowledgements

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The evaluators would like to express their gratitude to all persons met and who contributed to this evaluation, as listed in Annex II.

The evaluation team would like to thank the project team and in particular Mr Charles Sebukeera and Mrs Aderiana Mbandi for their contribution and collaboration throughout the evaluation process.

The evaluation consultants hope that the findings, conclusions and recommendations will contribute to the formulation of a next phase and to the continuous improvement of similar projects in other countries and regions.

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Brief consultant biography

Geraldo Carreiro holds an MSc in Water and Land Management from Cranfield University (UK) and has more than 25 years of experience in the areas of sustainable development, climate change, water management, rural development. He has carried out field missions in more than 50 countries, especially in Asia and Africa, with the EU, UNDP, UNICEF, AFD and other international agencies. He was Head of Cooperation for the EU in Sri Lanka, evaluator of EU cooperation projects but also within Member States in DG Environment of the European Commission. Recently, as Team Leader, Geraldo finalised and organised the capitalisation of the largest climate fund for EU cooperation (GCCA - Global Climate Change Alliance), and is a lead author of the EU guidelines for mainstreaming environment, biodiversity and climate change in European cooperation, to be published in 2024.

Renaud Hourcade is an academic researcher (politics, public policy) and expert consultant specializing in environmental policies, air and water pollution policies, urban environmental policies and climate mitigation/adaptation. He is the author of more than 15 publications related to these fields covering European and African contexts. He holds a PhD from Rennes University (France).

About the Evaluation

Joint Evaluation: No

Report Language(s): English

Evaluation Type: Terminal Evaluation

Brief Description: This report is a Terminal Evaluation of a UNEP project implemented between 2019 and 2022.The project's overall development goal was to "*Increase capacity for monitoring, compliance and enforcement of standards for air and water quality due to availability of qualitative and timely information in these cities (Addis Ababa, Nairobi and Cape Town)*". The evaluation sought to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, and the relevant agencies of the project participating countries.

Key words: Air Quality, Water Quality, Data platform, Evidence-based policy making.

Primary data collection period: April-November 2023

Field mission dates: September-October 2023

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List of acronyms ad abbreviations

CEDARE	Centre for Environment and Development for the Arab Region and Europe
EA	Expected Accomplishment
EOU	Evaluation Office of UNEP
EPA	Environmental Protection Agency
GEMS	Global Environment Monitoring Services
GRID	Global Resource Information Database
LCS	Low-Cost Sensor
LMIC	Lower Middle-Income Country
MoU	Memorandum of Understanding
MTR	Mid Term Review
NEMA	National Environment Management Authority (Kenya)
NGO	Non-Governmental Organisation
PoW	Programme of Work
ProDoc	Project Document
RCMRD	Regional Centre for Mapping of Resources for Development
SC	Sustainable Consumption
SD	Sustainable Development
SDG	Sustainable Development Goals
SEI	Stockholm Environment Institute
TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of Reference
UNEP	United Nations Environment Programme
WESR	World Environmental Situation Room

Project identification

Table 1: Project Identification Table

UNEP PIMS ID:	2062	Also called A5b	
Implementing Partners	City Authorities of Nairobi, Addis Ababa, and Cape Town Center for Environment and Development for Arab Region and Europe (CEDARE) Environment Pulse Institute (EPI) UNEP GEMS/Water Capacity Development Centre at University College Cork, Ireland UNEP GRID - Arendal Regional Centre for Mapping of Resources for Development Stockholm Environment Institute Strathmore Law School Yale Center for Ecosystems in Architecture		
Relevant SDG(s):	*Goal 3. Ensure healthy lives and promote well-being for all at all ages* *Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all* *Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all* *Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation* *Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable* *Goal 12. Ensure sustainable consumption and production patterns* *Goal 13. Take urgent action to combat climate change and its impacts* *Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development* 17.16.1 Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable developments.		
Sub-programme:	MTS 2018-2021: Environment Under Review MTS 2022-2025: Science-Policy	**Expected Accomplishment(s):**	**PoW 2018-2019 and PoW 2020-2021 – EA(a):** **PoW 2022-2023 – Outcome 3C**: Releases of pollutants to air, water, soil and the ocean are reduced.
UNEP approval date:	17 June 2019	**Programme of Work Output(s):**	**PoW 2018-2019 and PoW 2020-2021 – EA(a) Output 6:** National and regional reporting systems based on shared environmental information system principles generating

			open access to information
			PoW 2022-2023 – Direct Outcome 3.13: Sound science, data and statistics, analysis, information and knowledge are generated and shared.
Expected **start date:**	January 2019	**Actual start date:**	June 2019
Planned **completion date:**	December 2021	**Actual operational completion date:**	The official project end date was December 2021. However, activities were implemented until December 2022
Planned **project budget at approval:**	TOTAL: USD 1,942,425 Cash (Belt and Road Chinese fund): USD 1,000,000 In-kind: USD 942,425	**Actual total expenditures reported as of [date]:**	China Trust Funds: USD 973,541 In Kind: USD 942,425
Planned **Environment Fund allocation:**	N/A	**Actual Environment Fund expenditures reported as of 31/12/2022:**	N/A
Planned **Extra-Budgetary Financing:**	USD 1,000,000	**Secured Extra-Budgetary Financing:**	USD 1,003,062.20
		Actual Extra-Budgetary Financing expenditures reported as of 31/12/2022:	USD 1,004,493.28
First disbursement:	July 2019	**Planned date of financial closure:**	June 2023
No. of formal project revisions:	0	**Date of last approved project revision:**	N/A
No. of Steering Committee meetings:	0	**Date of last/next Steering Committee meeting:**	Last: N/A / Next: N/A
Mid-term Review/ Evaluation *(planned date):*	N/A	**Mid-term Review/ Evaluation (actual date):**	N/A
Terminal Evaluation *(planned date):*	December 2021	**Terminal Evaluation (actual date):**	April 2023 - February 2024
Coverage - Country(ies):	Ethiopia, Kenya and South Africa	**Coverage - Region(s):**	Africa
Dates of previous project phases:	N/A	**Status of future project phases:**	In proposal phase

Executive Summary

Project background

1. The UNEP project "Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa" (PIMS ID 2062) started in June 2019 and ended in December 2022. The stated general objective was to create the conditions of "enhanced productivity, improved human livelihoods and better public health through the production and dissemination of creditable science and data" (ProDoc, 2019). In this view, the project partnered with three selected pilot cities in Africa (Nairobi, Addis Ababa and Cape Town). This project benefited from a USD 1 million grant allocated by the Chinese Trust Fund, under the Chinese Belt and Road Initiative, in addition to UNEP in kind contributions.

This evaluation

2. The evaluation of the PIMS 2062 was conducted by an external team of consultants in application of UNEP project evaluation procedures. The assessment covered the complete period of implementation of the project, and took all activities carried out under the project in the three pilot cities in account. It was based on the analysis of the project documentation, the available project deliverables, the analysis of secondary sources and data, combined with 14 in-presence and 8 online interviews conducted with a large range of stakeholders. The Inception Report was delivered in August 2023. A field mission to Nairobi, took place from 25 September to 4 October. Initial findings were presented to the UNEP Project Team on 24 November 2023.

Key findings

3. Considering the health and economic burden of air and water pollution for African societies, and particularly for the inhabitants of large cities, improving local capacities for the monitoring of urban air and water quality is a direct and important contribution to the well-being of people and the environment. Activities in these fields are therefore closely connected to environmental early warning assessment objectives and risk mitigation strategies. The project PIMS ID 2062 was perfectly aligned with these objectives.

4. As the PIMS ID 2062 was the only project contributing to the objectives of project PIMS ID 2061, the intended benefits of creating a family of projects under PIMS ID 2061 never materialised. Potential benefits of such a set-up included the exchange of best practices and cross-learning between peer projects, having multiple sources contributing to enrich PIMS ID 2061 objectives, or improved cost effectiveness.

5. While the UNEP Team deployed tangible efforts to adapt to the effects of COVID-19, the pandemic affected project ambitions of experience sharing between the three targeted cities. Mitigation measures included the organisation of videoconferences, but these had limited knowledge sharing and capacity building possibilities, compared to presential exchanges. Despite these constraints, the project successfully remained active and available towards its counterparts throughout its implementation period.

6. One of the identified weaknesses of the project was that it took an undifferentiated approach to the selected cities, and also to the two components on air and water. This was done despite obvious differences in readiness and in governance systems, which could be observed at thematic level (e.g., air and water), and between cities.

7. While the project recognised the needs of differentiated communities or unprivileged people, it did not foresee how and when different categories of right-holders could be

directly taken into account at implementation level. As a result, it risked missing its targets, notably those related to vulnerable right holders.

8. The project also successfully built a short-term partnership between cities, one of them volunteering as a champion. This scheme probably can be replicated, through city clusters comprising leaders volunteering to support less advanced peers.

9. Strategic Relevance was rated as Highly Satisfactory. The project showed a clear alignment with MTS Subprogrammes 2018-2021, consistency with Donor regional priorities, involved a South-South partnership Project and finally, was complementary with (and built upon) previous interventions by UNEP.

10. Quality of Project Design was rated as Moderately Unsatisfactory. Despite a sound assessment of local governance mechanisms and issues in the fields covered, and a relevant scale of action, the project lacked building links between the Air and Water components. Further, targets remained vague. Its ambition to influence policy in the three cities appeared unrealistic. Expectations with respect to replication or scaling-up could have been better developed.

11. Effectiveness was rated as Moderately Unsatisfactory. Notably, there was visible progress in air quality monitoring with influence on related policies in Nairobi. However, full capacities to monitor air quality and the enforcement of air quality regulations were not in place at the time of project closure. Also, there was no evidence that any progress was made in terms of monitoring water quality in any of the target cities.

12. No major issues were identified regarding Financial Management, which was rated as Satisfactory, with the recommendation that the financial information should be more detailed at the level of individual activities (e.g., detailed costs of specific outputs, information on role of staff).

13. Team efforts towards execution timeliness was underlined by counterparts, which justified rating Efficiency as Moderately Satisfactory. Efficiency in terms of expenditures and value for money could not be fully appreciated due to the insufficient level of financial details provided in the reporting documents.

14. The lack of proper Monitoring and Reporting mechanisms could have been improved. It was rated as Moderately Satisfactory.

15. As the project raised stakeholder (notably cities and communities) interest in enhancing air (and water) quality monitoring, and the project is related to expected social, environmental and overall economic gains, yet mainly depend on external support, Sustainability was rated as Moderately Unlikely.

16. The overall Project Performance Rating was considered to be 'Moderately Satisfactory'.

Main Conclusions

17. The project's main motivation to support African countries in their efforts to improve air and water quality was extremely relevant. These issues still underpin major health, social and economic challenges that are still not adequately considered in many countries worldwide and have specifically devastating impacts in the African continent.

18. The choice to work at city level was particularly appropriate. Local administrations often have specific mandates over air and water quality management.

19. The project flexibility to local needs, and ability to navigate across external constraints (e.g., due to COVID19) was also well appreciated by the main project stakeholders.

20. Some weaknesses hindered the project effectiveness and potential sustainability and impact. These notably include an undifferentiated approach to the selected cities, and to the two of air and water components, despite obvious differences in readiness and in governance systems.

21. As a result, initial goals were particularly ambitious, notably when considering the wide scope of the project, covering two essential areas, the important needs of African cities, the national and international funding gaps on air and water quality issues, and the differences in legal mandates across the three cities.

22. Eventually, activities mostly focused on air quality issues. This ultimately led the project to be unable to reach its initial objectives on both air and water components.

23. The documenting and reporting systems could be improved. The details of project progress over time were not documented in detail. This limited the quality of internal decision-making processes and also of transparency towards external stakeholders and the global public.

Lessons learned

24. Partnering with different cities implies using a differentiated approach across sectors (namely, in the water and air sectors) and city partners.

25. To build the bridges that allow air and water quality monitoring to contribute to improved policy making, a specific strategy is needed.

26. There was added value in gathering evidence and building the case for improving water and air quality monitoring mechanisms.

Recommendations

27. Due to the importance and relevance of working in the thematic areas of air and water quality improvements, it is strongly recommended that UNEP continues supporting air and water quality monitoring in African cities. The evaluation notes that a continuation project is being developed and hopes that the lessons and recommendations from this evaluation will be included in that proposal.

28. Explicitly identify Human Rights and Gender Equality issues specific to each locality where the project will focus, to define an adequate response strategy.

29. Build project reporting and transparency in project management routines in order to bring added value during implementation.

1 INTRODUCTION

30. The UNEP project "Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa" (PIMS 2062, also known as A5b) started in June 2019 and ended in December 2022. The stated general objective of the PIMS ID 2062 was to create the conditions of "enhanced productivity, improved human livelihoods and better public health through the production and dissemination of creditable science and data" (ProDoc, 2019). In this view, the project partnered with three selected pilot cities in Africa (Nairobi, Addis Ababa and Cape Town) in order to improve air and water quality monitoring and management at city level, and influence air and water related policies.

31. This project benefited from a USD 1 million grant allocated by the Chinese Trust Fund, under the Chinese Belt and Road Initiative, in addition to UNEP in-kind contributions. The planned total budget at approval of the project was USD 1,942,425, of which USD 1,000,000 XB and USD 942,425 in-kind. The project was implemented by the UNEP Africa Office jointly with UNEP Early Warnings Assessment Division (formerly Science Division). Due to the disturbances caused by the COVID-19 pandemic, an amendment to the Strategic Cooperation Agreement between the People's Republic of China and UNEP was signed in December 2020. This amendment granted a no-cost extension of the duration of the Agreement allowing activities that were due to terminate on 31 December 2021 to be extended up to 31 December 2022.

32. This project was designed as a contribution toward the expected accomplishments stated in UNEP Programs of Works 2018-2019 and 2020-2021, particularly with regard to the following stated objective: "Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action". More specifically, the project sought to enhance both technical and policy making capacities, at the level of the three pilot cities, in order to allow them to more effectively monitor the environment (air and water), make related data accessible, adopt norms and standards, and finally enforce regulation.

33. This UNEP project 2062 (A5b) was directly related to the UNEP project 2061 (A5) entitled "Foresight, emerging issues and strategy for the environment - Implementing Pilot Air and Water Quality Monitoring Systems". The latter can be defined as an 'umbrella' project within which PIMS ID 2062 was nested. The stated purpose of the PIMS ID 2061 was to contribute to the "identification and communication of emerging issues to policy makers and the public", through "environmental information made available through foresight and strategic methods as well as by the systematic review and evidence-based analyses of emerging issues". PIMS ID 2061 and 2062 had therefore overlapping goals, with 2062 designed so as to directly contribute to the accomplishment of 2061 objectives, along with other potential projects. While the scope of 2062 was regional (Africa) and limited to air and water quality monitoring and related policies, the focus of 2061 was larger both in terms of coverage (all continents) and in terms of the environmental issues considered (not restricted). Referring to this backdrop, PIMS ID 2062 (A5b) was designed as a "pilot study" that could pave the way for other activities falling under the scope of 2061 (A5).

34. In line with the UN Environment Programme Evaluation Policy and the UNEP Programme Manual, this Terminal Evaluation (TE) was launched in May 2023 to assess the project performance in terms of relevance, effectiveness and efficiency, and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. It conformed to the Terms of Reference (TORs) presented in Annex VI. This evaluation was designed to identify lessons and share knowledge in view of the preparation and implementation of further activities in the same (or related) fields. It put a particular emphasis on the formulation of recommendations for further project design activities and operational improvements.

35. The target audience for this Terminal Evaluation is primarily the UNEP staff directly contributing to the Science-Policy (formerly Environment Under Review) subprogramme, the UNEP Africa Office and evaluation staff at UNEP. Among project stakeholders, the lessons learnt from this project are of interest for the administrative and technical personnel of the cities of Addis Ababa, Nairobi and Cape Town involved in matters of water and air pollution monitoring and abatement, as well as for the elected persons in charge of these issues. It is also expected that lessons learnt from this project will be of operational relevance for ministerial bodies and agencies in charge of the regulation of water and air pollution, such as the National Environment Management Authority (NEMA) in Kenya, the Environment Protection Agency of Ethiopia and the Department of Environmental Affairs in South Africa.

2   EVALUATION METHODS

2.1 Evaluation approach

36. The evaluation of the PIMS 2062 was conducted by an external team of consultants in application of UNEP project evaluation procedures. Its scope and methodology were guided by the Terms of References [TOR – see annex VI], the key strategic evaluation questions, the set of evaluation guidance documents and evaluation tools made available by the UNEP Evaluation office. The Evaluation Team worked in partnership with, and under the supervision of Fabio Fisicaro, Evaluation Manager at UNEP's Evaluation Office.

37. The Terminal Evaluation covered the complete period of implementation of the project, and took into account all activities carried out under the project in the three pilot cities. It was based on the analysis of the project documentation, the available project deliverables, the analysis of secondary sources and data, combined with 14 in-presence and 8 online interviews conducted with a large range of stakeholders. Both consultations and desk analysis were used to gather information to triangulate information/data and thereby ensure their coherence and robustness.

38. Following UNEP evaluation requirements, nine criteria were assessed and rated: (A) Strategic Relevance; (B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, including assessment of provision of outputs, achievement of outcomes, and likelihood of impact; (E) Financial Management; (F) Efficiency; (G) Monitoring and Reporting; (H) Sustainability; and (I) Factors Affecting Performance. The overall rating

was calculated using a weighted table (see Annex IV). These categories, together with the Key Strategic Questions elaborated in the ToR, were used to develop an Evaluation Matrix (see Annex III), which contained a series of relevant questions, organised by evaluation category, together with indicators and sources of evidence. This instrument was used to guide data collection and analysis.

39. No project other than the PIMS ID 2062 was finally launched under the PIMS ID 2061 'umbrella' project. This resulted in the PIMS ID 2062 being the sole contribution to the PIMS ID 2061. While this evaluation was exclusively focused on the achievements of the PIMS ID 2062 and only reviews activities undertaken within this framework, it took into account this particular organisational context when reviewing the project design and main achievements.

2.2 Inception report

40. An Inception Report was finalised in August 2023. This document was shared with the project team and project stakeholders so as to ensure mutual understanding with respect to the scope and aim of the evaluation, the key questions explored, the methods and steps of the evaluation process.

41. The Inception report included a reconstructed Theory of Change. Although the ProDoc featured a logical framework putting in relation an outcome, outputs and milestones, conceptual weaknesses in this section of the ProDoc led the Evaluation team to propose a reconstructed Theory of change (rToC) presented below (section 4.2). This step allowed for a better conceptualisation of the project's intentions, activities and expected accomplishments, against which its performance could be assessed. The rToC proposed a redefinition of some outputs, clarified assumptions and drivers, offered a reconstruction of the logical pathways linking outputs, outcome, intermediate states and impact. The rToC was verified against fieldworks findings and was confirmed as a valid Toc for the Evaluation.

42. The Inception report also contained a reconstructed stakeholder analysis. This analysis, informed by the project documents and preliminary interviews with the project's team, allowed for a better conceptualisation and identification of the various categories of stakeholders concerned with the activities (see section 3.3). It was guided by, and made consistent with, UNEP Stakeholders analysis guidance note. This stakeholder analysis was then used to identify actors who could provide useful feedback and evidence during the evaluation's main phase.

2.3 Stakeholder engagement

43. The evaluation process relied on a participatory approach, keeping key stakeholders informed and consulted on the main steps, challenges and directions of the evaluation. Preliminary findings were presented during an online meeting on November 24th, 2023, which offered an opportunity to clarify or complete facts, provide feedback and validate the main orientations of the evaluation. The draft Terminal Evaluation (TE) report was also shared with the Project Management team and project stakeholders, thus providing an additional opportunity for clarification and feedback. This process allowed the

Evaluation team to adjust the emphasis of its findings, conclusions and recommendations. In addition to strengthening the robustness of the assessment, this participatory approach was designed as a way to foster stakeholders' ownership of the evaluation's findings and favour uptake of lessons learned and recommendations.

2.4. Data collection

44. All available project documentation were reviewed, notably the approved ProDoc, workshop and training reports, a Technical progress report (May 2020), a report on project highlights, and the Final Project Report (May 2022). On the financial side, the documentation included the initial budget at project approval and revised budget documents. Reports related to individual deliverables, when made available were also reviewed. This included reports by Yale and CEDARE to data management activities, the two reports on baseline assessments of Air and Water monitoring and pollution hotspots in Nairobi and Addis Ababa commissioned to RCMRD, and the two reports on "Institutional and infrastructural framework for water resources managements status and requirements for capacity building in Nairobi city county" and "Capacity development for the water resources, assessment, monitoring and management" commissioned to expert George Khroda (see Annex IV - Key documents reviewed).

45. Following initial consultations with the UNEP Evaluation Office and with the project team, it was decided that field visits would be organised in two of the three partner cities: Cape Town and Nairobi. These cities were selected as the initial review of project performance appeared to reveal a relatively higher degree of project activity. The opportunity to have direct interaction with UNEP staff in Nairobi was also taken into account. Interviews with Stakeholders in Ethiopia were therefore foreseen to be held through videoconferences.

46. Initial videoconferences and email contacts with the South African partners revealed that only a very limited number of stakeholders had made a truly significant and sustained commitment to the project activities. Given the circumstances, it was decided, with the approval of the UNEP Evaluation Office, to continue only with online interviews and cancel the field mission to Cape Town. In total, only four of the project's listed stakeholders accepted to be interviewed. The other people contacted indicated they were not involved in the project or felt that their involvement was not sufficient to share relevant information.

47. The field mission to Nairobi, led by the Support Evaluator, took place from 25 September to 4 October 2023 and allowed the evaluator to interview 16 people (14 meetings) in a variety of roles. The meetings took the form of semi-structured interviews, with questions aimed at gathering or cross-checking information on strategic evaluation questions, and more generally at reconstructing the progress of the project, confirming or identifying its main players, finding out about the obstacles encountered and the decisions taken to adapt to them, and finally identifying the project's successes and drawing lessons from them, based on the stakeholders' own evaluations and feedback. The set of questions were adapted according to the category of stakeholders and was designed to delve into aspects of the projects for which each actor was more susceptible to bring personal experience, feedbacks and insights. Interviews lasted from 50 to 120 min.

48. Information gathering in Addis Ababa encountered difficulties in contacting key project stakeholders. After numerous attempts, and with the decisive support of the program officer, it was possible to organize an online interview with the project Focal Point in Addis Ababa. Although the interview proved very informative, it is the only direct contact and source of information that could be accessed for project activities implemented in Ethiopia. Indirect sources, however, were used notably among the stakeholders consulted in Nairobi, as several also carried out some activities in Ethiopia, and were therefore able to share information and analyses about activities in this country.

49. Throughout the evaluation process and in writing the Evaluation Report, efforts were made to present the views of both mainstream and less powerful actors. Data was collected in a manner that respected ethics, human rights issues, and followed UN Standards of Conduct. The Evaluation team paid particular attention to collecting evidence related to the project's announced equal opportunity strategy and to the efforts made into integrating issues related to gender and vulnerable groups. Specifically, the TE Team analysed the extent to which community groups and/or local NGOs/CBOs were involved in the project and helped the views and interests of the more vulnerable to be taken into account. The interviews also sought to capture the project response to gender considerations and assess the extent to which this aspect was considered relevant by the stakeholders.

Table 2: Respondents' Sample

		# people involved (M/F)	# people contacted (M/F)	# respondent (M/F)	% respondent
Project team (those with management responsibilities e.g. PMU)	Implementing agency	4/2	4/2	4 /2	100 %
	# entities involved	# entities contacted	# people contacted (M/F)	# respondent (M/F)	% respondent
Project (implementing/ executing) partners *(receiving funds from the project)*	9	7	9/0	7/0	77.7 %
Project (collaborating/contributing[1]) partners *(not receiving funds from the project)*	3	3	3/0	3/0	100 %
Beneficiaries: <u>*Examples:*</u> Duty bearers Gate keepers Direct beneficiaries Indirect beneficiaries Civil society representatives	4	3	16/1	8/1	59%

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[1] Contributing partners may be providing resources as either cash or in-kind inputs (e.g. staff time, office space etc.).

2.5 Analysis and reporting

50. As part of a triangulation method, the Evaluation team made systematic use of all the evidence gathered to build its assessment of the project performance. The process not only took into account evidence and data directly addressing the evaluation issues, but also sought to gather a comprehensive, realistic image of the often complex operational context in the three countries/cities where the project was implemented. Leveraging the advantage of working as a team, the evaluators systematically discussed together the findings related to each of the three cities, thus building a shared assessment of the project's dynamics, challenges and achievements.

51. The evaluators are confident that their context-sensitive and cross-validation approach led to a robust and credible evaluation, as well as to useful lessons learned and recommendations. Results are presented in a way that strictly follows the report template provided as part of the UNEP Evaluation Office guidance documentation.

3 THE PROJECT

3.1 Context

52. In the context of rapid and largely unplanned urbanisation, air and water pollution have become a pressing issue in many African cities. For a vast majority, air quality is not meeting WHO standards for safe air, while access to adequate and safely managed drinking water sources has been a long-lasting challenge in many of them. This situation bears significant consequences on human development, health and wellbeing. Among other factors, the observed progression of non-communicable diseases across the continent can be related to the lasting and growing exposure of urban populations to a contaminated environment.

53. Air quality in African cities can be negatively affected by human activities such as motorised transportation (both collective and individual) notably when it relies on out-of-age vehicles, use of biomass for cooking and heating, open burning of waste, dust generated by car and truck traffic, or construction works. Another key aspect of the issue lies with the lack of regulation and control of pollutants emitted by industries located within or close to the city.

54. Overall, according to WHO, air pollution leads to millions of preventable deaths each year—4.2 million in 2016—90% of which are concentrated in Low- and Middle-Income Countries (LMICs). Existing studies show that chronic air pollution, especially exposure to particulate matter, can affect respiratory and cardiovascular health through conditions, such as chronic obstructive pulmonary disease, myocardial infarction, stroke, and cancer. A study that was carried out in Senegal, for example, identified the links between poor air quality and conditions like asthma and bronchitis, especially in urban regions (Touré et al., 2020). Links have also been established between particulate matter (PM) pollution and neurological development in children, and with diabetes. Although health consequences at African urban level are known in a generic way, they are usually not

tracked locally or characterised with a high level of precision. This is due to the weakness of data, reporting systems and of epidemiological infrastructure in most African countries.

55. With respect to this alarming situation, the development of technical capacities by public authorities to monitor pollution, set abatement targets and enforce regulations is critical. Yet, this technical capacity, together with the legal and institutional frameworks needed to effectively address and control polluting activities, are lacking or remain weak in most African cities. This hampers the development and implementation of local public policy strategies. At the time of the launch of the evaluated project (PIMS ID 2062), neither Kenya nor Ethiopia had more than a handful of air pollution monitoring stations functioning in the country, resulting in a concerning lack of localised data. Policy experts in the field of air pollution were also rare in both countries. While the institutional framework for water management is generally better established, technical capacities to efficiently monitor quantity and quality of surface and groundwater resources are insufficient in those two countries.

56. Against this backdrop, the PIMS ID 2062 was designed to provide support to three pilot cities – Nairobi, Addis Ababa and Cape Town – in developing permanent monitoring capacities in the fields of air and water, and making the data produced available and used in legal enforcement efforts to improve public health. An initial analysis made during project design showed that, like many African cities, both Nairobi and Addis Ababa were affected by high levels of air and water pollution but lacked the technical, financial and human capacity to set up and manage permanent monitoring activities. Institutional frameworks to enforce norms and standards in both countries were also assessed as perfectible.

57. The PIMS ID 2062 also built from past UNEP experiences. On the one hand, UNEP was involved in promoting and demonstrating the use of Low-Cost Sensors as a tool to demonstrate to countries it was feasible to collect air quality data and how to use the related information (e.g., for siting, relation to air quality and population density, risks, etc). On the other hand, UNEP supported national stakeholders, including in cities, to develop clean air action plans. The PIMS ID 2062 had aspects of continuity with these experiences.

58. Cape Town had much more advanced monitoring capacities and was in a much better position to efficiently enforce air and water legislation. Nevertheless, partners of the City of Cape Town expressed interest to enhance their expertise through specialised training, notably in communication tools and outreach capacities. During the course of the project, however, Cape Town was rather used as a resource city, sharing its knowledge and experience in a south-south framework, and its expressed interests eventually became less of a priority in the delivered trainings.

59. In accordance with the project's objectives, the intervention strategy mainly focused on capacity building through training of specialised personnel in various competencies. It also included material support for the setting up of monitoring devices (low-cost sensors) in the cities of Nairobi and Addis Ababa, as well as technical resources and training into the treatment of the generated data and its integration into accessible databases. In

addition, the project included the setting-up of a community of practice that was intended to foster peer-knowledge exchanges between expert staff of the three cities and maintain them in the long term.

3.2   Results Framework

60. There were close links between the results frameworks of the project A5b (PIMD ID 2062) and project A5 (PIMS ID 2061). This influenced the evaluation of project A5b, which therefore also considered its contributions toward the achievement of A5's outcomes.

61. The results statements of project A5b as appearing in the Logical Framework and in other parts of the Project Document slightly differ in their formulation. As stated in the Logical Framework, the project outcome was to reach a "*strengthened capacity of three pilot cities (Addis Ababa, Nairobi and Cape Town) for air and water quality monitoring and compliance and enforcement of standards increased due to availability of qualitative and timely information*".

62. The project sought to reach this outcome through three planned outputs, formulated as:

    Output A: "Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals".

    Output B: "Institutional and technical support in urban air quality monitoring and water management provided to cities".

    Output C: "Support provided for the establishment of national network including public platforms on urban water and air quality monitoring, reporting".

63. This result framework relied on logical and plausible connections between the three components of this project.

    -    Output A provided the basic knowledge of the technical and institutional frameworks within which activities would have to take place in each city. It intentionally left some room for adaptation of the work program according to the local context specificities highlighted by the needs and gaps assessment.

    -    Output B formed the core of the component of the intervention: through adjusted capacity building, technical capacities and institutional settings are improved in order to allow cities to monitor air quality and water, and to manage them efficiently.

    -    Output C was concerned with the data dissemination and data reporting aspect of the project: once measuring and management capacities are established, efforts are put on the constitution of national networks and information platforms in order to channel information about air quality and water quality, using the resources of the "World Environment Situation Room", a key UNEP open Platform for environmental knowledge dissemination.

64. As mentioned above, a particularity of this project design was that it was closely connected to the results framework of A5 (PIMS ID 2061). PIMS ID 2061can be defined as an 'umbrella' project within which PIMS ID 2062 was nested. The two projects had

overlapping goals. The outcome of project A5b was also Outcome 2 of the project A5, which presented the following outcomes:

> 1. Increased access to timely and up to date information for reporting on environmentally related SDGs
> 2. Increased capacity for monitoring, compliance and enforcement of standards for air and water quality due to availability of qualitative and timely information in three cities (Addis Ababa, Nairobi and Cape Town)
> 3. UNEP's assessment and decision-making processes strengthened through credible data flows available from countries and organisations to help keep the environment under review
> 4. Increased public awareness of foresight and strategy studies in UNEP priority areas

65. Further, the original Outputs A, B and C of Project A5b were the same as the Outputs 2.1, 2.2 and 2.3 (respectively) of project A5. Outputs of A5 are listed below:

> 1.1. A. An online knowledge and reporting platform providing access to data and information for various sources to keep the environment under review
> 2.1. A. Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals
> 2.2. B. Institutional and technical support in urban air quality monitoring and water management provided to cities
> 2.3. C. Support provided for the establishment of national network including public platforms on urban water and air quality monitoring, reporting
> 3.1. B1: A dynamic list of foresight issues that UNEP is conducting foresight and strategy exercised on.
> 3.2. B2. Environmental foresight, modelling, simulation, horizon-scanning and scenarios-building constructed and directly contributes to open access to environmental data and information at global, regional, and national levels.
> 3.3. B3. Trained national staff
> 4.1. A. A global network of stakeholders

66. The PIMS ID 2062 was implemented without using a formal Steering Committee, which could have helped through providing formal guidance, supported the project team and clarified internal decision-making processes.

3.3   Stakeholders

67. While the project document described the stakeholders' interests and expectations in various sections, it did not provide for a detailed analysis of their respective roles for the achievement of the project outcome and outputs. During the Inception phase of this evaluation, a reconstructed stakeholder analysis was proposed, with the view to better represent their respective status either as beneficiaries, implementing partners or other type of stakeholders. A distinction between major and minor stakeholders was also introduced, taking into account the assessment of power and interest in the project. This disaggregation by type of stakeholder and re-classification according to expecting role was made to facilitate the appreciation of their specific interest, strategies, impact on the

project or impact by the project (See Table 2). Stakeholders are listed according to these distinctions in the following sections.

Table 3: Reconstructed Stakeholder analysis at Evaluation

Stakeholders	Power they hold over the project results/implementation and the level of interest	Did they participate in the project design, and how·	Roles and responsibilities in project implementation	Changes in their behaviour expected through implementation of the project
Type A: *High power / high interest = Key player*				
Urban authorities of Addis Ababa, Nairobi and Cape town	These urban authorities have a legal duty to take up responsibilities in the field of air and water pollution. They have expressed the will to improve compliance to environmental standards through evidence-based policy processes. They have demonstrated high interest and the project and have key influence on its achievements both in terms of outputs and the general outcome	Yes, through previous interactions with the project leader and team, consultations and revision of the project document.	Urban authorities impact the project through: dedication of administrative and technical staff, engagement in activities (training, networking, production and uploading of data), provision of information and access to relevant actors at the local level.	-Enhanced capacity to produce and disseminate high quality data about water and air pollution -Enhanced capacity to implement standards and policies related to surface water and air quality -Enhanced prioritization of air and water pollution in the local policy process activities -Better informed decision making in urban planning and urban environment management
RCMRD	This international organization specializes in the provision of up-to-date data on environment and resources, with the view to support member states in their development strategies and policy making. RCMRD was tasked with the mission to provide baseline information, qualitative and quantitative assessment on the state of water resources and air quality in Addis Ababa and Nairobi. They hold power and have strong interest in the data production aspect of the project.	No.	Produced two detailed reports on water pollution hotspots and air quality assessment for Nairobi and Addis Ababa.	Not applicable (Implementation partner)
Stockholm Environment Institute (SEI)	SEI was a key implementation partner in this project. They have extensive experience and specialized knowledge on air quality policing in the region. They hold power and had strong interest in the public policy aspect of the project.	Yes, through previous interaction, consultations and capitalization of previous projects	SEI was tasked with awareness raising activities targeting elected members of Nairobi County Assembly.	Not applicable (implementation partner)

CEDARE	CEDARE is a NGO specializing in sustainable development studies and international cooperation. It was tasked with supporting the Air Quality Community of practice for Africa.	Yes, through consultation.	CEDARE provided backing and tools for the constitution of a community of practice	Not applicable (implementation partner)
The Yale University Center for Ecosystems in Architecture	Yales' expertise and collaboration was instrumental to allow the integration of the air and water quality data flows into the World Environment Situation Room	Yes, through consultations.	Yale's experts were in close contact with UNEP and cities staff to ensure data integration into the WESR and dashboards.	Not applicable (implementation partner)
Strathmore Law School	Partnered with UNEP Africa office and SEI on the policy side of the project (Nairobi). Strathmore academics provided expertise and legal advice to Nairobi County Assembly and administration in drafting an Air Quality Law.	No.	Strathmore's contribution was important in the legal-policy process in Nairobi.	Not applicable (implementation partner)
Environmental compliance Institute	ECI was a contracted partner tasked with supporting strategy and action plan development for Air Quality in Addis Ababa and Nairobi, through developing tools and guidance.	No.	ECI contributed to the policy work in Kenya and Addis Ababa. ECI took part in the workshops that supported awareness raising and agenda setting work in Nairobi	Not applicable (implementation partner)
Type B: *High power/ low interest over the project =Meet their needs*				
National ministries of Environment and dependent agencies (EPA – Ethiopia, NEMA – Kenya)	Ministries and specialized national agencies have a general duty to take care of environmental issues at country level. They have an interest in the availability of accurate data and to have data acquisition models disseminated across the country and therefore have an indirect interest in the project. National level authorities can impact the project through making data or actors or platforms accessible. They also hold influence on the scaling up phase which is foreseen beyond the project itself.	Yes, through consultations.	National level authorities must provide their support in various activity, notably data dissemination through official channels, dissemination of lessons learned, and contribution to building replication strategies. The project should ensure their needs and expectations are fulfilled through information	-Enhanced capacity to produce and disseminate high quality data about water and air pollution nationwide -Enhanced prioritization of air and water quality objectives into the national policy process and governmental activities

				channels, and their responsibilities respected.
Type C: *Low power / high interest over the project= Show consideration*				
National ministries of Health	Have a general duty to monitor environmental factors impacting good health and well-being	No.	No role in implementation	-Integration of more accurate environmental health knowledge in the policy process -May support specific studies into the impact of water and air pollution on health
Academia, High level research centres and universities in the three countries	Have a general duty and interest to produce and have access to up-to-date knowledge regarding levels of air pollution. Also an interest in the development of up-to-date measuring methods and models	No.	No role in implementation.	Develop the use of available new air and water pollution data into research programs, and expert inputs to the policy process.
Mobilized parties across local civil society	Do not hold power over the project but may provide key inputs in the role of spokespersons of the most affected communities (I.e. Informal dwellers, street sellers, etc). and people most vulnerable to air and water pollution's impact on health (I.e., women, infants, people living with chronic disease). May help the project team and other stakeholders consider the specific interests of vulnerable communities.	No	No role in implementation	May be better equipped to advocate for better air and water quality.
Type D: *Low power / low interest over the project= Least important*				
Other providers of air pollution or water pollution data (i.e. National	Do not hold power over the project but may have an interest and may bring useful inputs	No	No role in implementation	No specific changes expected.

Meteorology Services)				
Businesses and business organizations	Do not hold power over the project but may exert pressure over the broader issue of monitoring pollution activities at the local level	No	No role in implementation	No specific changes expected

Beneficiaries

68. **Key stakeholders** of this project were the governmental and administrative personnel of the three pilot cities. They were the main beneficiaries of the project in terms of capacity building and were directly impacted by the project outcome. However, they were also in a position to affect the results of the project, depending on their level of engagement with the project activities. Cities could impact the project through dedication of personnel, engagement in training, networking, production and uploading of data, provision of information and access to relevant actors at the local level. They have high power and high interest in the project.

69. Other major stakeholders pertaining to the 'beneficiaries' category were the Ministries of Environment and dependent agencies (EPA – Ethiopia; NEMA – Kenya). Ministries and agencies did not directly take part in the project, but they had the power to impact the project positively or negatively depending on their level of adhesion to the objectives. Replication and upscaling of the tools is also dependent on their support and goodwill. Consequently, they had low interest in the project but high power in terms of reaching its ultimate goals.

70. **Minor stakeholders** typically have low interest and low impact on the project, but may express needs or an interest and therefore have to be kept informed. In this project, they include the Ministries of Health in each country, the Academia, the national offices of statistics, the National Meteorology Services/Agency, Businesses and business organisations.

71. Governmental and local public bodies were the main beneficiaries taken into account in the project design and implementation. However, as a principle, UNEP's work is guided by a human rights-based approach to development which means that policies, programmes and projects must be centred on human beings as the rights-holders and aimed at their benefit and the constant improvement of their well-being (UNEP Stakeholders analysis guidance note). While the nature of this project left little doubt that its ultimate goal was the improvement of the general well-being of citizens, the ProDoc did not provide a description of how and when different categories of right-holders were to be directly taken into account in the project.

Categories of "bearing right" stakeholders for this specific project would include:

- All inhabitants of the three cities

- Inhabitants of the most exposed communities to polluted air and water: people living close to pollution hotspots (roads, surface waters hotspots), which, according to environmental justice data, tends to concern more informal dwellers and economically marginalised people, people relying on water resources for their living, people exposed to air pollution in their daily professional activities (drivers, informal sellers, etc.)

- People most vulnerable to polluted air and water (infants, the elderly, people living with heart and respiratory or other chronic diseases).

- • People from the civil society engaged in advocacy activities, or citizen science activities, or playing a role as whistle blowers regarding air and water quality.

72. Written reports documenting the project's implementation and results did not inform on these categories of stakeholders. Interviews with the project teams, institutional beneficiaries and implementing partners sought to gather information on how these ultimate beneficiaries had their voiced conveyed and taken into account into the project.

Implementing partners

73. A different category of stakeholders is made of the various actors that directly took part in the implementation of the project. They include public or private organisations, whose expertise was requested in order to provide for specialised data or tools, training in a variety of capacities, or any other type of activity deemed necessary to the realisation of the project's components.

74. For this project, UNEP relied both on capacities located in other branches of the organisation and on externalised capacities. Specialised partners pertaining to the UNEP eco-system included **GEMS Water** capacity Centre, **GRID-Geneva** and **GRID-Arendal**.

   - **GEMS Water Capacity Centre** is an UN-Affiliated NGO that specializes in collecting global water quality data for assessments of status and trends in global inland water quality. They provided expert support on the water aspect of the project.

   - **GRID-Geneva** is a Global Resource Information Database office that provided support in the data production and database integration component of the project. It facilitated data integration into the World Environment Situation Room.

   - **GRID-Arendal** is another office that specializes in communication and outreach activities. This office assisted with the production of leaflets used to communicate on air and water pollution issues toward the larger public.

75. The project was also implemented through the following external implementing partners:

   - The **Stockholm Environment Institute** (SEI) is an NGO that has implemented various projects in the field of Air pollution in the Region, and that has a good understanding of the network of actors. In this project, UNEP partnered with SEI for activities related to the advocacy/policy component of the project for Nairobi and Addis Ababa.

   - The **Regional Centre for Mapping of Resources for Development** (RCMRD) is an International organisation based in Nairobi, specializing in the provision of geospatial services. Its role in the project was to provide mapping and trend analysis of air and water pollution, using satellite and low-cost sensors data for Addis Ababa and Nairobi

   - The **Centre for Environment and Development for the Arab Region and Europe** (CEDARE) is a non-profit organisation based in Cairo, specializing in sustainable development studies and international cooperation. It was tasked with supporting the Air Quality Community of practice for Africa.

- The **Yale University Center for Ecosystems in Architecture** is an American academic department. It was tasked with creating a technical interface/dashboard for data uploading, management and visualisation for the three cities.

- The **Strathmore University Law School** is a Kenyan university department. It was contracted by UNEP to provide legal advice and expert input and contribute to draft a new legislation for Air Quality in Kenya.

- The **Environmental Compliance Institute** is an NGO located in Nairobi that seeks to raise awareness and build capacity related to the promotion of sustainable societies in Africa. ECI took part in the workshops that supported awareness raising and agenda setting work in Nairobi.

76. Partners that participated in the implementation of the PIMS ID 2062 do not exactly match the list of partners that was prepared during project design. The main differences are that SEI and ECI were initially not supposed to take part in the project, while it was anticipated that two Chinese technical agencies and structures (the Beijing Air Quality Monitoring Centre, the Chinese Academy of Science) would play a role in capacity building activities. On the one hand, the involvement of SEI and ECI matched the convincing developments in the public policy component of the project. On the other hand, the foreseen contributions of the Chinese counterparts turned impractical due to the severe lockdown restrictions during the COVID-19 crisis in China, that nearly suppressed all possible exchanges and technical contributions. The potential for establishing deeper ties with Chinese counterparts in the spirit of implementing a true South-South cooperation was therefore not realised.

3.4   Project implementation structure and partners

77. The project was implemented by the UNEP Africa Office in close connection with the Science Division (now named Early Warning Assessment Division). Day to day project management and coordination tasks ware carried on by a project manager with the assistance of a Project Coordinator Officer, a technical coordinator, and a Fund Manager Officer

78. The project governance did not include an official Steering Committee. It was expected at design that the regular (weekly or bi-weekly) virtual meetings of the Science Division-Regional Office would track progress of the project, with participation of the three cities focal points when appropriate. Due to the fact that the minutes of relevant meetings were not made available, the evaluation team was not able to confirm whether regular discussions took place in this context.

79. The following diagram offers a representation of the implementation structure of the project.

Figure 1: Organigram of the Project with key stakeholders
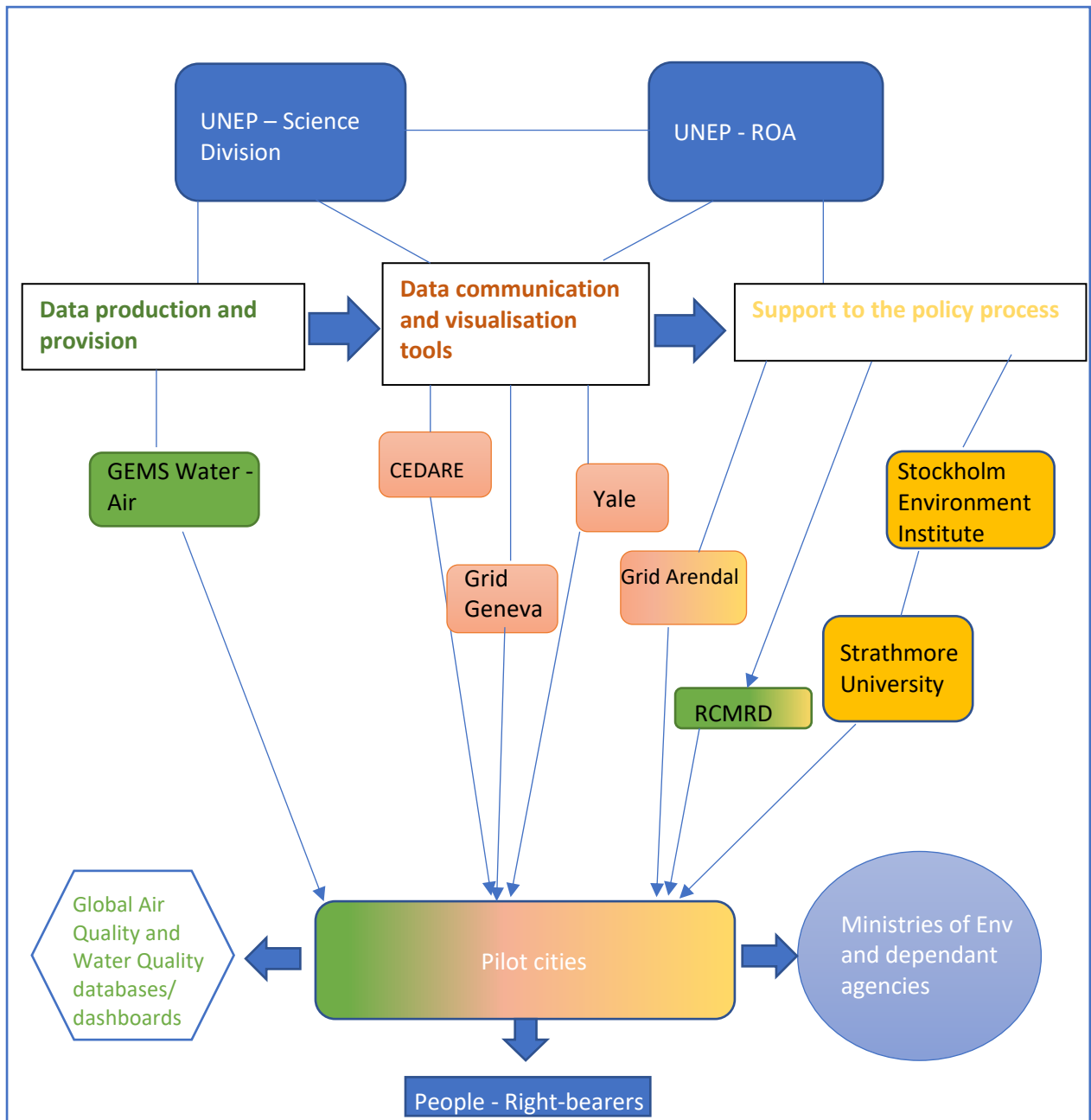
3.5   Changes in design during implementation

80. Due to the outburst of the COVID-19 pandemic, only a few months after the beginning of activities, the funding framework agreement between the People's Republic of China and UNEP was amended to allow for a one-year extension of the impacted projects with no additional budget (until December 2022). This extension was granted to allow more time to complete or adapt activities to this new context. However, although this would have certainly been useful to record specific project difficulties and monitor adaptation strategies and steps taken, no formal Project Revision of the PIMS ID 2062 was adopted in the course of implementation.

81. Notwithstanding the absence of a formal revision in the project design, some changes occurred in the course of implementation. Overall objectives were fixed, yet the project design foresaw in-built flexibility to integrate activities according to needs and gaps assessments initially foreseen at city level during project inception. These assessments allowed to identify strategic opportunities and activities that directly impacted on the project, for instance by allowing new partnerships or modifying the nature or the importance of some originally proposed activities.

82. Important changes were the introduction of new implementation partners (notably, SEI) to conduct work on the policy support side of the project in Nairobi particularly, while other expected partners, more on the data production side, were finally not solicited (Chinese Academy of Science and Beijing Air Quality Monitoring Centre) due to the closure of all international relations with China as a consequence of the COVID-19 pandemic. COVID-19 also impacted the scope of activities that could be directly conducted in Cape Town and Addis Ababa, such as site visits.

3.6   Project financing

83. The project budget as formulated in the project document is reported in Table 3 below. As this preliminary budget does not detail expected expenditures and is not organised by component, outcome or activity, it is not possible to calculate the correspondence ratio between planned and actual expenditures at the level of components or outcomes.

84. The general financial information related to the initial budget, budget revisions and the final budget made available to the Evaluation Team generally lacked congruency and remained insufficiently detailed (see below, under the Financial Management section).

Table 4. Budget at project approval

Type of Funding	Source of Funding	Details	2018	2019	2020	2021	2022	Total
Cash	Environment Fund activity budget[1]							
	Regular Budget activity budget							$0
	Total EF/RB Core Funding		$0	$0	$0	$0	$0	$0
		Secured XB funding "Belt and Road Chinese fund" *PSC XB Funds 13% ($115,044)*	$0	$400 000	$400 000	$200 000	$0	$1 000 000
		Total Secured	$0	$400 000	$400 000	$200 000	$0	$1 000 000
	Total XB Funding		$0	$400 000	$400 000	$200 000	$0	$1 000 000
In-Kind	Environment Fund staff costs		$9 006	$108 075	$108 075	$108 075	$81 056	$414 288
	Regular Budget staff costs		$8 206	$98 475	$98 475	$98 475	$73 856	$377 488
	Overhead Trust fund staff costs		$1 416	$16 988	$16 988	$16 988	$12 741	$65 119
	Other staff costs (XB)		$1 859	$22 313	$22 313	$22 313	$16 734	$85 531
	Other In-Kind Funding	In-Kind Contribution from GRID Partners	$0	$0	$0	$0	$0	$0
	Total In-Kind Budget		$20 488	$245 850	$245 850	$245 850	$184 388	$942 425
Total A5b Budget			$20 488	$645 850	$645 850	$445 850	$184 388	$1 942 425

85. The final budget provides some information on expenditures per Output, but cannot be reconciled with Table 4. It is presented in Table 5.

Table 5. Expenditure by Outcome/Output

Component/sub-component/output *All figures in USD*	Estimated cost at design	Actual Cost/ expenditure*	Source of funding	Expenditure ratio (actual/planned)
Output A	Not known	276 773	China TF	Not calculable
Output B	Not known	450 262	China TF	Not calculable
Output C	Not known	171 096	China TF	Not calculable
Cross outputs activities	Not known	101 870	China TF	Not calculable
Total budget	1 000 000	1 000 000	China TF	100 %

*Only extra-budgetary costs. Please note that internal staff costs (in-kind) have not been indicated according to specific outputs in budget documents and are therefore not included in this table.

4   THEORY OF CHANGE AT EVALUATION

86. The Project original Theory of Change laid out the strategic framework and logical causal pathway of the intervention. However, the Theory of change lacked important information, which makes it hard to understand. A reconstructed Theory of change (rToC) was designed to better capture the logic of the intervention, and also ensure consistency with UNEP's definitions of results and with the organisation's core objectives. The rToC was later completed during fieldworks and through further exchanges with the project team.

4.1   Initial Theory of Change

87. As presented in the ProDoc (section 3.1, p. 17), the project Theory of Change adopts a straightforward structure and consisted of one Outcome and three Outputs.

Outcome: "Strengthened capacity of countries for making evidence-based decisions due to increased awareness on the state of the environments at the regional, sub-regional and national level as a result of the use and management of quality environmental information".

The stated Outputs were the following:

    A. Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals.

    B. Institutional and technical support in urban air quality monitoring and water management provided for data gathering and storage in three pilot cities for policy action; compatible with the UN Environment Situation Room.

    C. Establishment /strengthening of national networking on urban water and air quality monitoring and reporting.

88. Overall, this results framework seemed coherent, relying on plausible logical pathways. However, its simple structure also led to long Outputs and Outcome, that put together a lot of information. These statements tended to congregate various level of results, and create ambiguity on which part of the Outputs was leading to which part of the Outcome. While the ToC is not supposed to focus on activities, in this case it included types of activities or outputs, often described in a generic way (e.g., p.16: "establishment of platforms for co-learning", "provide generic capacity building").

89. Another notable weakness was that, although the general objectives and pathway remained similar, text used in the Theory of Change section lacked consistency with the one used in the Logical Framework and with other sections of the ProDoc, notably on the formulation of outcome and outputs.

90. The diagrammatic representation of the initial Theory of Change (see Figure 2) also shows some weaknesses. Namely, the logical phases and steps laid out in this diagram are neither consistent with the narrative formulation of the Theory of Change, nor with the logical framework or other sections of the project document. For instance, the text within

the arrow should have reflected a causal process, but the steps do not match with the project stated outputs. The second (middle) and third (upper) texts in the blue arrow are identical. Also, these claim for "a change of institutions", which is not explicitly intended by the project. The texts in the orange bubbles are associated to "Enabling conditions" on the bottom and "Impact" at the top. Yet, the two first bottom bubbles are related to proposed activities. How these activities were supposed to lead to a change should have been explained in the ToC. Finally, the third bottom red bubble (right hand-side) focused on gender sensitive practices for food value chains, a topic which was not covered by the project. The result is that this diagram missed the goal of adequately representing the causal pathways linking activities, outputs, outcome and impact.

Figure 2: Diagrammatic representation of the Initial Theory of Change (source: approved Project Document, 2019, p. 18)
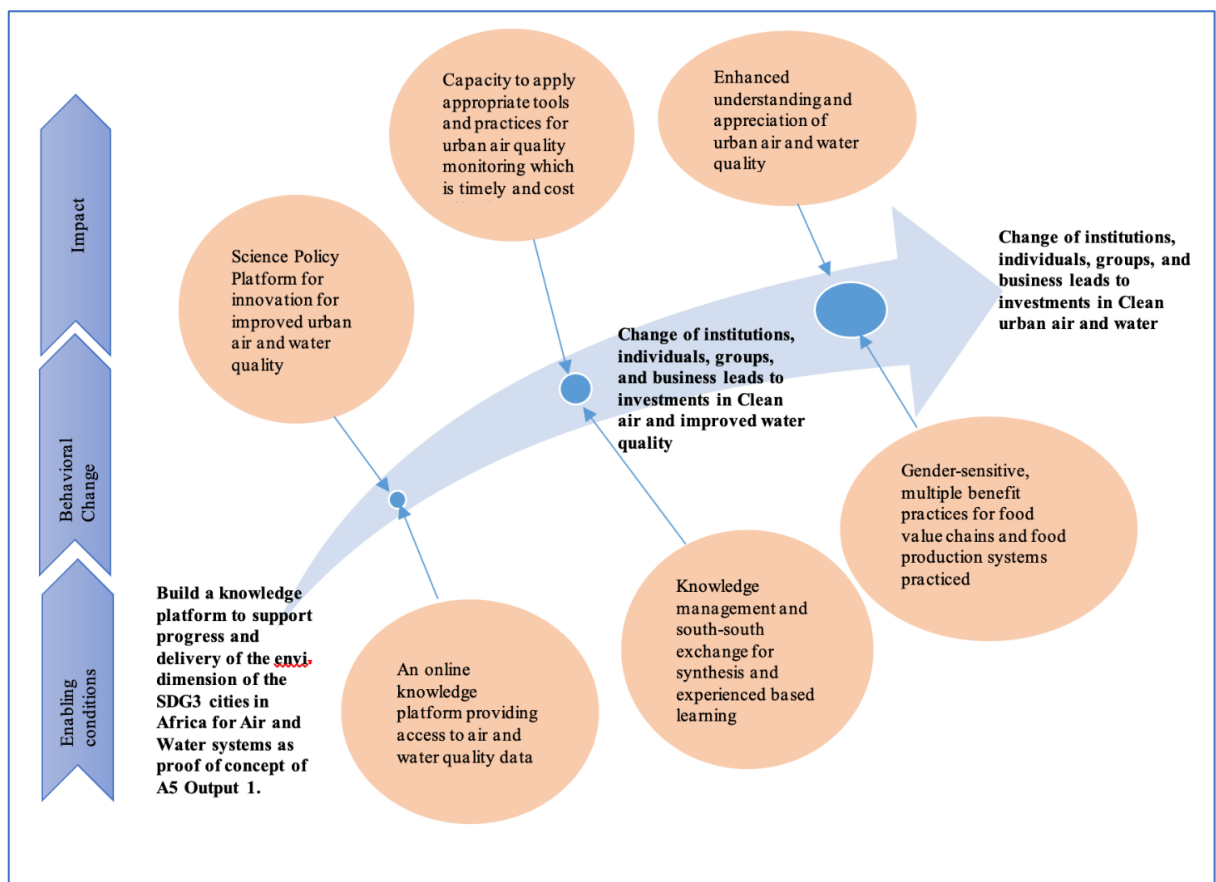
4.2   Reconstructed Theory of Change

91. These shortcomings and inconsistences justified a re-formulation of the ToC, with the view of:

   o   Unpacking the original formulation of the original Outputs and Outcomes;
   o   Re-establishing an upward logical chain clarifying how the Outputs contributed to the Outcome and the Outcome to the Intermediate States and Impact;
   o   Ensuring internal consistency in formulation, within each level of the ToC;
   o   Clarifying the main assumptions and drivers;

o Ensuring that result statements were consistent with UNEP results definitions[2].
o Ensuring a clear conceptual understanding of the project impact pathways that could guide the TE.

92. The first, important, step of this reconstruction therefore consisted in unpacking and clarifying the Results framework of the project (see Table 6). The outcome statement needed to be reformulated to ensure consistency with UNEP's definition of results (see below). Impacts and Intermediate States were missing in the original ToC. Therefore, these were introduced and logically articulated, according to UNEP's project design guidelines, within the general causal pathway underpinning both this project and the parent A5 project. The three original outputs were reorganised in five outputs to better capture and reflect the project steps and intentions.

Table 6: Justification for Reformulation of Results Statements

Results statement in the ProDoc (Logical Framework)	Results for reconstructed Theory of Change at Evaluation	Justification for reformulation
Impacts		
Impacts were not explicitly formulated.	Improved public safety and health	With reference to the project rationale, the long-term impact is to improve public health and avoid its degradation due to poor water and air quality.
Intermediate states		
The Project Document does not explicitly include Intermediate States. Yet, it proposes the following Relevant Expected Accomplishments[3]: *SP7 EA(a): Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action*	IS1: Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action. IS2: National emissions sources identified, policies, legal, regulatory, fiscal and institutional frameworks and mechanisms for the reduction of air pollution developed,	The relevant Expected Accomplishments are considered as Intermediate States in the reconstructed ToC and are left unchanged.

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[2] UNEP, 2021, Glossary of Results Definitions
[3] i.e., "changes at the outcome level beyond the Project Outcome(s) that are required to contribute towards the achievement of the intended impact of a project" (UNEP Glossary of Results Definitions).

SP5 EA(c): National emissions sources identified, policies, legal, regulatory, fiscal and institutional frameworks and mechanisms for the reduction of air pollution developed, institutional capacity built for improved air quality, and air quality assessments done by countries with UNEP support	institutional capacity built for improved air quality, and air quality assessments done by countries with UNEP support.	

Outcome

Strengthened capacity of three pilot cities (Addis Ababa, Nairobi and Cape Town) for air and water quality monitoring and compliance and enforcement of standards increased due to availability of qualitative and timely information.	The three pilot cities (Addis Ababa, Nairobi and Cape Town) monitor air and water quality, comply with and enforce standards.	Capacity building is considered a result at the Output level according to the UNEP Glossary of results. Therefore, the original Outcome statement needed to be reformulated. Other Outcomes could relate to the Project (see below, table 5: Reconstructed Theory of Change), yet only the reformulated Outcome can be related to the original (and single) indicator: *Number of cities that have monitoring stations established, technical trainings conducted and public bulletins and briefs published using qualitative data.* *Baseline on Sept. 2018: 0* *Target by June 2020: 3 cities*

Outputs

A. *Needs and gaps assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals*	Output 1. The three target cities identify priority capacity building needs for areas of improvements in water and air quality monitoring Output 2. The pilot cities have access to a model for air quality monitoring Output 3. The pilot cities have access to a model for water quality monitoring	The original Output A gathers activities and Outputs that are needed for the cities to identify areas for support, identify a strategy (the project uses the terminology "model") and act upon it. The new Outputs reconstruct these steps and thereby give more details on project intentions. The final purpose of the output (e.g., reporting on SDGs) is better suited to be included in the higher Outcome/Impact levels and

		is deleted in the new formulations. The three Outputs can be related to the original indicators: i1. Number of cities for which a needs and gaps assessment is available to support the capacity building planning for urban air and water quality monitoring and facilitate reporting sustainable development goals, and national assessment processes Baseline on August 2018: 0 Target: December 2018: 3 i2. A model for a city air quality monitoring system, hotspots analysis, including network for data sharing Baseline on August 2018: 0 Target: December 2018: 3 i3.A model for a city water quality monitoring system, hotspots analysis, including network for data sharing Baseline on August 2018: 0 Target: December 2018: 3
B. Institutional and technical support in urban air quality monitoring and water management provided for data gathering and storage in three pilot cities for policy action; compatible with the UN Environment Situation Room.	Output 4: The three pilot cities receive institutional and technical support in urban air quality monitoring and water management for data gathering, storage, reporting, and policy action.	The Output is reformulated from the perspective of the beneficiaries. It can also be related to the original indicators: i4. Urban water and air quality indicator frameworks agreed and adopted by the urban authorities and governments at relevant national forum. Baseline:0 Target: 3 i5. Baselines for urban air and water quality indicators in the three cities calculated and published on open platforms.

		Baseline: 0 Target: 3 Technical support missions Baseline:0 Target: 3 i6. National level capacity building workshops undertaken. Baseline on Sept. 2018: 0 Target: by Dec. 2019: 3
C. Establishment /strengthening of national networking on urban water and air quality monitoring and reporting.	Output 5: National stakeholders in the target cities have access to dedicated network platforms on air and water data and communities of practices.	The Output is reformulated from the perspective of the beneficiaries. The reformulated Output 5 can also be related to the original indicators: i7.Regional workshop for National focal points and other key stakeholders participate in national environmental information networking to exchange knowledge and lessons learned on sharing and using water and air quality data for urban planning. Baseline August 2018: 0 Target August 2021: 3 i8. National network reports including lessons learned. Baseline August 2018: Target December 2021: 3

93. Major causal pathways underlying the rToC are described below. Figure 3 offers a diagrammatic representation of the rToC. Changes between the revised Project document and the rToC are described in Table 6.

4.3 Causal pathways from outputs to outcome

94. Identifying capacity building needs and priorities (Output 1) and deciding which water and air monitoring models to develop, according to their own specific needs (Outputs 2 and 3) are initial necessary steps for the three pilot cities (Addis Ababa, Nairobi and Cape Town) to prepare for air and water quality monitoring. Outputs 2 and 3 imply that Output 1 provided sufficient information to cities to build relevant capacity and implementation models on air and water quality monitoring, adapted to their needs and priorities (Driver 1).

95. Outputs 1, 2 and 3 were intended to lead to the effective setting up of data collection capacity (Output 4) and organisation of better targeted capacity building sessions (Output 5), so that the information generated contributes to developing enforcement programmes in the supported cities.

96. To reach the Outcome, the project assumed that cities perform regular air and water quality monitoring using the devices, methodologies and platform promoted by the project (Assumption 1).

97. The analysis of the ProDoc allowed to unpack Output 4 and 5 to clarify the Project intentions and activities. Notably, Output 4 implied activities related to data collection (absent in the original results framework and only present at Milestone level), management and interpretation (p14, 17) mostly packed within capacity building sessions (p16), leading to improved policy making. A step-by-step approach would include:

    o The pilot cities are equipped with a minimum set of air and water quality data collectors.

    o Increased knowledge among cities of innovative tools, methodologies and use of web-based platforms for water and air monitoring and analysis at their own level.

    o Pilot cities have access to recommendations leading their policy making to better take air and water quality issues into account.

98. As for Output 5, these comprised the intended dialogue, coordination and setting up of arrangements with national stakeholders (ProDoc, p. 13, 15, 18), the access to, exchange and dissemination of information notably through common platforms (ProDoc, p.13, 14, 16, 17, 18, 19), and dedicated network capacity building notably on reporting, and exchange activities (ProDoc, p.15, 19). Related steps included:

    o National stakeholders are enabled to interact within a national network.

    o Online platforms hosting data, knowledge, methodologies are made available to national stakeholders.

    o Increased knowledge of national stakeholders on the use of air and water quality reporting tools.

    o National stakeholders identify and exchange their best practices related to national water and air quality monitoring systems.

99. In reference to its gender approach, the Project should have also ensured that gender sensitive approaches were considered in all activities, in stakeholder involvement and in access to gender-disaggregated data (Driver 2).

100. The capacity building activities of the project should have led to a stronger adoption of the models by national stakeholders (Driver 3). Driver 3 therefore related to the capacity of the project to act as a pilot for potential replication.

4.4 Causal pathway from outcome to intermediate states

101. Through "underpinned national air and water quality assessments and indicator-based reports with scientifically credible data and information" (ProDoc, p17), the three cities were expected to improve their basis for evidence-based policy and decision making. They were also supposed to acquire improved capacities to promote the upscale (at national level) of urban air quality monitoring (ProDoc, p16). This is directly related to the Intermediate State/SP7 EA(a): *Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action.*

102. The focus on air quality also justifies the link to the Intermediate State/SP5 EA(c): *National emissions sources identified, policies, legal, regulatory, fiscal and institutional frameworks and mechanisms for the reduction of air pollution developed, institutional capacity built for improved air quality, and air quality assessments done by countries with UNEP support.* For this causal pathway to materialise, a key assumption is that there would be a demand at the national level for the updating and enforcing of air quality regulations, and that national stakeholders would agree to disclose air and water data and related information (Assumption 2).

4.5 Causal pathway from Intermediate States to Impact

103. Decision making informed by credible air and water quality knowledge directly links to the more general objectives of improved public health and safety. To reach this impact, the project assumed that air and water quality information would be used by public and private decision makers in order to reduce health related impacts, with special consideration to vulnerable groups including women (Assumption 3). This also implies that public health objectives are prioritised over the continuation or development of economic activities that may induce environmental pollution.

Figure 3: Reconstructed Theory of Change
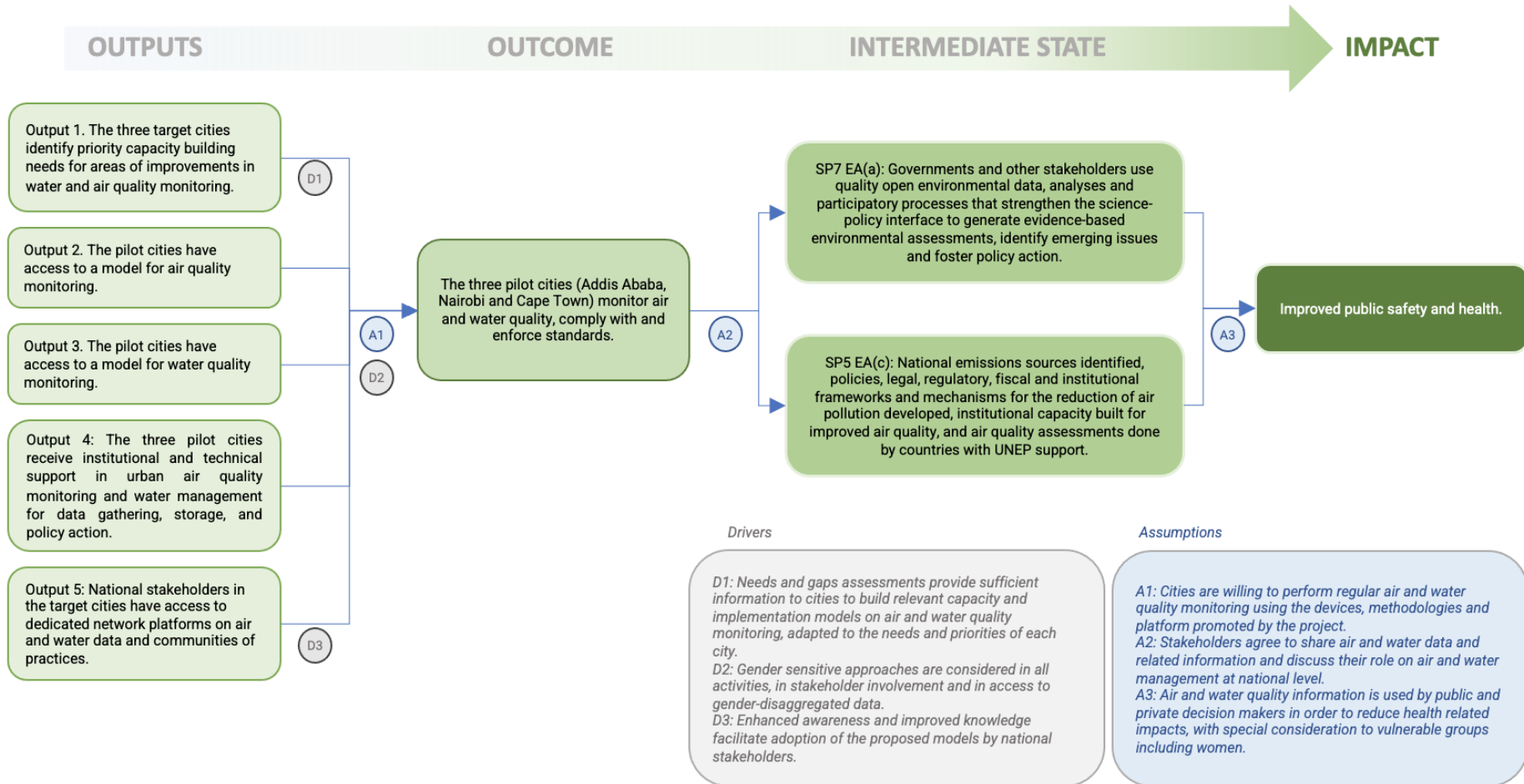
EVALUATION FINDINGS

4.6 Key Strategic Questions

4.6.1 Why were two distinct projects (ID 2062 and ID 2061) designed? What were the advantages of designing two distinct projects? Did the foreseen advantages materialize during the project implementations? What lessons can be learned about the particular interlinked designs of these projects?

104.   While the projects have different ID numbers, suggesting different activities, they are better characterized as being an umbrella project (as for PIMS ID 2061) and its subset (PIMS ID 2062). One initial intention was to have various sub-projects under the same umbrella, yet this scheme never realised and only the PIMS ID 2062 could eventually be considered an offspring and contribute to the objectives of project PIMS ID 2061. Therefore, the intended benefits of creating a 'family' of projects under the PIMS ID 2061, including the exchange of best practices and cross-learning between peer projects, or having multiple affiliates contributing to PIMS ID 2061 objectives, never materialised.

105.   Further, the PIMS ID 2061 priorities included the possibility to orient sub-projects towards the production of knowledge on pollution, as part of an early warning assessment strategy. They therefore justified and provided a rationale for the joint consideration of two very different sectors, water and air, in a single project, backed by the construction of a common knowledge base. However, this approach overlooked the significant institutional and policy-making particularities that differentiate these two sectors, as well as the fact that knowledge production cannot be separated from policy making. It led to a very difficult implementation in the water sector, which was less suited to the intervention than air.

106.   A specific lesson learned is therefore that individual projects could indeed use common objectives (and related indicators) without needing to depend on specific umbrella projects (i.e., with associated additional means and resources, and a complex architecture).

4.6.2 What were, if any, the additional benefits and costs of the PIMS ID 2062 being closely related to the PIMS ID 2061?

107.   Potential benefits of using various projects under the same general umbrella programme could have been to ensure efficiency during implementation, and/or a better convergence and capitalization of projects. The fact that the PIMS ID 2062 was finally the sole project developed means it was not possible to assess the validity of such potential benefits.

108.   At operational level, none of the stakeholders was aware of the existence of an umbrella project such as the PIMS ID 2061. The use of common tools managed by UNEP could be identified as an advantage, such as WESR. Yet, this was understood as a benefit related to working with UNEP as a global actor, the project hierarchy seeming superfluous.

109.   The lack of granular information on costs made it impossible to assess potential advantages or disadvantages related to this project setup.

4.6.3 What changes were made to adapt to the effects of COVID-19 and how might any changes affect the project's performance?

110.   COVID-19 mainly affected the project in its ambitions of experience sharing, between the three targeted cities. This was mitigated by the organisation of videoconferences. Stakeholders said that such sessions probably had a lesser impact that presential ones would have. The pandemic also affected the capacity of the project to visit and monitor progress made at city level, notably Addis Ababa and Cape Town.

111.   Despite COVID-19 constraints, the project successfully remained active and available towards its counterparts.

4.6.4 In what ways, and to what extent, have the needs and interests of differentiated groups been considered in the implementation and monitoring of the project?

112.   The project context recognised the needs of differentiated communities or unprivileged people. Still, the design did not specifically take into account these needs or translated them into precise activities across the three pilot cities. An undifferentiated approach to the selected cities, and to the air and water components, hampered a clear definition of how and when different categories of right-holders were to be directly taken into account in the project. It follows that, at both design and implementation stages, the project generally failed to address the specific interests of vulnerable people or to allow their voice and concern to be meaningfully taken into account.

113.   In addition, the project proposed combined interventions in the fields of water pollution and air pollution despite the fact that these public policy sectors involve different stakeholders and face very different technical or political challenges. The ProDoc did not provide a clear rationale for addressing these two sectors in the same project. Beneficiary wise, the project adopted a blanket approach and risked missing reaching its objectives, notably those related to vulnerable right holders.

4.6.5 How could Water and Air Quality monitoring be linked with early warning and disaster risk management?

114.   Water and Air Quality monitoring can directly be related to meteorological, hydrological and environmental early warning systems. Considering the health and economic burden of air and water pollution in African cities, improving local capacities for the monitoring of urban air and water quality is a direct and important contribution to the well-being of people and the environment. Activities in these fields are therefore closely connected to environmental early warning assessment objectives and risk mitigation strategies. The PIMS ID 2062 was perfectly aligned with these objectives.

115.   While meteorological early warning systems typically focus on predicting weather-related events like hurricanes or floods, Hydrological Early Warning Systems can also predict potential floods, yet by focusing specifically on water-based hazards notably in hazard prone areas. In this case, sensors continuously monitor identified water bodies, tracking water levels, rainfall amounts, or soil moisture content. High quality air sensors can track pollution levels in real time, and alert citizens when harmful substances exceed a maximum threshold.

4.6.6 How could similar interventions go beyond sectors of water and air (e.g. pollution and waste management)?

116.   Pollution is a cross-cutting issue which can only be monitored if applied to specific environments (air, water, soil, etc.) and linked to the proliferation of undesirable elements (plastic, particulate matter, gaseous pollutants, organic matter, pesticides). Water and air

have the advantage to focus on a medium, which quality can be monitored. Any element disturbing pristine quality is basically unwanted, only tolerated below a set threshold. This makes monitoring and limit-value setting the two core elements of policy-making in this field. This feature puts scientific knowledge and observational data production at the centre of any intervention strategy. Yet those are resources that are expensive and generally in short supply in most African countries, hampering potential influence on public policing on these issues.

117.   Against this backdrop, the strategy adopted in this project was to rely on the political will and institutional mandate of local authorities to take a role in monitoring and abating pollution. This choice can be appropriate, notably when there is local willingness to take up such issues, as made visible in the case of Nairobi. Some cities also have financial and administrative capacities that surpass those of the national state. Interventions in other sectors, such as soil pollution, could follow the same strategy. Yet, chances of success are closely correlated with the existence of a political momentum, as, again, is demonstrated in the Nairobi case. Precise knowledge of the political situation and careful adaptation of the intervention were a very positive feature of this project and replication of this approach can only be encouraged.

118.   Political will is essential to successful environmental management and yet, could be insufficient if technical management is not adapted to local conditions. In the case of solid waste, for instance, managing and disposing waste depend on processes, which level of complexity will vary according to local needs. Quality strategies to reduce the amount of unusable materials and their release in the natural environment are often related to complex processes (including, the identification of various types of waste, and various measures related to the discarding, destroying, processing, recycling, reusing, or controlling of these wastes). Hence, waste management monitoring is also about setting meaningful processes and ensuring their control.

119.   To address issues beyond air and water, it should be recognised that all environmental interventions ultimately lead to an improved human health. In other words, environmental assets that act as local determinants of degraded health (i.e., health disturbers) are those who should be monitored in priority.

4.6.7   What opportunities could be considered to upscale for more capitals and countries in Africa?

120.   The project successfully built a short-term partnership between a small number of cities, one of them volunteering as a champion. Taking profit of this partnership, the Focal Points have engaged in a community of practice, which is beneficial to their day-to-day activities. This peer-learning approach probably can be replicated, through city clusters comprising leaders volunteering to support less advanced peers, in a South-South setting. Clusters could unite at least two capital cities with similar backgrounds (in size, or by their coastal/terrestrial nature).

121.   Opportunities for upscales could also be found in countries willing to reduce GHG emissions in their mobility sector or in other sectors[4], as expressed in their Nationally Determined Contributions. The NDCs are increasingly used for leveraging international support through climate finance, including through cities and partnerships between them[5].

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[4] https://climateandhealthalliance.org/initiatives/clean-air-ndc-scorecard/
[5] https://eu-mayors.ec.europa.eu/en/home

4.7   Strategic Relevance

4.7.1   Alignment to UNEP MTS, POW and Strategic Priorities

122.   The project's relevance in relation to UNEP's mandate is demonstrated by its alignment with the organisation's Medium-Term Strategy (MTS) 2018-2021 at the time of project design. The MTS listed "improving air quality for a better environment and improved human health" as one of the key objectives of the organisation. More specifically, UNEP MTS 2018-2021 committed to "support monitoring and emissions inventories, as well as efforts to make air quality data more accessible and understandable to the public, to enable cities, countries and citizens to be fully aware of their air quality challenges"[6]. Supporting air quality monitoring and making data more accessible to cities and countries was at the core of this project. The strengthening of legal, institutional frameworks and capacity building for the reduction of air pollution was another line of action mentioned in this strategy.

123.   The water component of the project was equally aligned with the MTS, which mentioned water scarcity as a pressing and growing challenge in its global situation analysis (p. 4). Water pollution also contributes to the rise of non-communicable disease and therefore contributes to the health burden of developing countries. Additionally, poor water quality is detrimental to biodiversity (p.7). Under the section "Healthy and productive ecosystems", UNEP MTS recognizes the necessity to monitor the health and productivity of freshwater ecosystems" (p.32). Nevertheless, freshwater monitoring issues remain less emphasized in the UNEP MTS than air pollution monitoring and related pollution abatement concerns.

124.   An additional pillar of UNEP's Vision 2030, duly reflected in the MTS 2018-2021, is the organisation's concern with the production and dissemination of sound, credible data about the state of the environment. The PIMS ID 2062, as well as PIMS ID 2061, were perfectly aligned with the vision that "Governments and other stakeholders are empowered by quality environmental assessments and open access to data and information" (p.46). The project's focus on environmental data production and data integration into accessible platforms, such as the World environment Situation Room managed by UNEP, directly contributed to the "keeping environment under review" objectives and to the reinforcement of the science-policy interface that is central to UNEP's mandate.

125.   There was also clear compatibility between the project's objectives and the relevant PoW, as described in the "Relevance" section of the ProDoc (p14). The project's Intermediate States were consistent with the expected accomplishments listed in the UNEP's Programs of Work 2018-2019 and 2020-2021, notably within the Environment Under Review Subprogramme: "Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify

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[6] UNEP Medium-Term Strategy 2018-2020, p. 39.

emerging issues and foster policy action" (EA (a). The project also related to PoW 2022-2023 – Outcome 3C: "Releases of pollutants to air, water, soil and the ocean are reduced".

126.   UNEP's Strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building (BSP) (2004) and South-South Cooperation and Triangular Cooperation (SSC-TC). The BSP relates to the capacity of governments to comply with international agreements and obligations at the national level, promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. SSCTC is a strategy that puts cooperation between developing countries at the core of learning and capacity building processes. UNEP adopted the following definition of SSC: "A process whereby two or more developing countries pursue their individual and/or shared national capacity development objectives through exchanges of knowledge, skills, resources and technical know-how, and through regional and interregional collective actions, including partnerships involving Governments, regional organisations, civil society, academia and the private sector, for their […] mutual benefit within and across regions." Triangular cooperation "involves Southern-driven partnerships between two or more developing countries supported by (a) developed country(ies) and/or multilateral organisation(s) to implement development cooperation programmes and projects"[7].

127.   The project design was fully consistent with these strategic priorities. Technology support and capacity building were at the heart of the intervention, which was based on the premise that advanced technical capacities for environmental monitoring are required to foster better policies and preserve both health and the environment. As regards SSC, it was also a pillar of the intervention. At design, the project sought to harness China's remarkable and successful experience in monitoring and reducing urban air pollution. Although this did not realize because of the outburst of the Covid-19 pandemic, a strong South-South cooperation component remained through the construction of a community of practice gathering the three pilot cities, and through the use of Cape town as a model and a resource for peer-learning in both fields of water and air quality monitoring.

Rating for Alignment to UNEP MTS, POW and Strategic Priorities: Highly Satisfactory

4.7.2   Alignment to Donor Strategic Priorities

128.   This project was selected for funding by the Chinese Trust Fund through a competitive process. This selection process ensured the compatibility of the intervention with the donor's strategic and regional priorities. Discussions with the Donor took place during design stage and contributed to refine the topic and objectives of the intervention, in accordance with the donor's priorities and expectations.

Rating for Alignment to UNEP/GEF/Donor Strategic Priorities: Highly Satisfactory

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[7] United Nations Environment Programme Strategy for South-South and Triangular Cooperation, Policy coordination Unit, February 2020.

4.7.3   Relevance to Global, Regional, Sub-regional and National Priorities

129.   As regards the relevance of the project in relation with global priorities, the overall project objective related closely to SDG11 on air quality in the cities and SDG6 on water and sanitation. The project proposal correctly mentioned other SDGs addressed by some aspects of the project, including SDGs 3, 7, 8, 9, 12, 13 and 17. Air and water pollution are also recognised as a raising priority concern in the Global South by other international institutions such as WHO, the World Bank, UN Habitat and numerous cooperation and development donors and stakeholders.

130.   There is no doubt that air and water quality are relevant issues at the regional level. 90 % of the cities impacted by poor air pollution are located in the Global South. Africa is the region with the fastest rate of urbanisation, a trend that is directly connected to growing air and water pollution issues. Lack of capacities to address this issue have been largely recognised regionally. As argued in the ProDoc, *African Ministerial Conference on the Environment* pinpoints the need for African countries to improve the management of chemicals, wastes, and the control of land, air (outdoor and indoor), freshwater, marine and other forms of pollution through strengthening of knowledge management, policy, legislative and regulatory frameworks. East-African countries including Ethiopia and Kenya signed the 2008 Nairobi agreement which recognizes the need to step up governmental action and regional cooperation to reduce urban air pollution. As for UNEP's priorities for Africa, the MTS 2018-2021 pinpointed the need to "build the capacities of countries, subregions and regional institutions to assess and monitor environmental trends and facts on environmental matters".

131.   Although this was not elaborated in the ProDoc, combating air and water pollution have rarely been on top of national governmental agendas in Kenya and Ethiopia. However, both countries have seen successful initiatives supported by international donors that helped raise the issue at national level. Ethiopia, for instance, has long been engaged in a national strategy to promote clean vehicles. This context made the agenda setting strategy of the project most relevant. The project ambitions in terms of capacity building were unfortunately not matched by national priorities at the time of project design, as these seemed to miss recognising the need for such support in air and water quality monitoring.

132.   Last but not least, the project context recognised the needs of differentiated communities or unprivileged people, yet the design did not specifically take into account these needs or translate them in precise activities across the three pilot cities. Beneficiary wise, the project adopted a blanket approach and risked to miss reaching its objectives when it comes to vulnerable right holders.

Rating for Relevance to Global, Regional, Sub-regional and National Priorities: Moderately Satisfactory

4.7.4   Complementarity with Existing Interventions/ Coherence

133.   Although this was not made apparent in the ProDoc, the project clearly built on previous UNEP interventions in the field of air and water pollution. Past UNEP projects dealt with awareness raising and institutional capacity building in East-African cities

(Gaborone, Kampala). This project was also parallel and coherent with other interventions on air pollution monitoring led by the UNEP Early Warning and Assessment Division (formerly Science Division), and with the work of GEMS Water. In addition, as argued in the project document, the data production component of the project strongly converged with UNEP's effort in building a global digital database on the environment, the World Environment Situation Room. Also notable was the complementarity of this project with other initiatives in the field of Air Pollution by international stakeholders acting in Nairobi and/or Addis Ababa, eg. C40, US-EPA, Stockholm Environment Institute.

Rating for Complementarity with existing Interventions:	**Highly Satisfactory**

Overall rating for Strategic Relevance[8]:	**Highly Satisfactory**

4.8   Quality of Project Design

134.   The quality of project design was assessed using an agreed template during the evaluation inception phase. Ratings were attributed to identified criteria and an overall Project Design Quality rating was established. The project design received an overall rating of 3.36 (Moderately Unsatisfactory). The calculating table is reproduced below (Table 6). The full Project Design Quality template is annexed in the Evaluation Inception Report.

Table 7: Assessment table of Project Design Quality

	SECTION	RATING (1-6)	WEIGHTING	TOTAL (Rating x Weighting)
A	Operating Context	5	0.4	0.2
B	Project Preparation	3	1.2	0.32
C	Strategic Relevance	3	0.8	0.24
D	Intended Results and Causality	3	1.6	0.48
E	Logical Framework and Monitoring	4	0.8	0.32
F	Governance and Supervision Arrangements	4	0.4	0.16
G	Partnerships	4	0.8	0.32
H	Learning, Communication and Outreach	3	0.4	0.12
I	Financial Planning / Budgeting	2	0.4	0.08

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[8] Note that all compound evaluation ratings are consolidated based on the Weightings Table for Evaluation Criteria provided by UNEP, version dated 07.08.2023.

J	Efficiency	4	0.8	0.32
K	Risk identification and Social Safeguards	4	0.8	0.32
L	Sustainability / Replication and Catalytic Effects	3	1.2	0.36
M	Identified Project Design Weaknesses/Gaps	2	0.4	0.08
			TOTAL SCORE:	*3.36 – Moderately unsatisfactory* *(Sum Totals divided by 10)*

1 (Highly Unsatisfactory)	< 1.83	4 (Moderately Satisfactory)	>=3.5 <=4.33
2 (Unsatisfactory)	>= 1.83 < 2.66	5 (Satisfactory)	>4.33 <= 5.16
3 (Moderately Unsatisfactory)	>=2.66 <3.5	6 (Highly Satisfactory)	> 5.16

136.   The assessment focused on the quality of the approved ProDoc, its logical framework and Theory of Change. Interviews conducted in Nairobi with the project's team and partners tended to show that, for this specific project, knowledge of the institutional context in Kenya and feedback from previous and parallel projects were sometimes more detailed and better considered during the design phase of the project than reflected in the ProDoc. The information gathered during field visits was taken into account in the description of the project's strength and weaknesses that is offered below. This information is considered as complementary, yet did not change the rating of the project design quality.

4.8.1   Strengths

137.   The project had a very strong justification basis, as it aimed to address a fundamental and pressing issue linking environmental quality and human health. WHO considers that the effects of air pollution are associated with 1.1 million deaths in Africa in 2019[9], while contaminated water is the second-biggest cause of premature deaths caused by pollution. Both issues are duly flagged as priorities in numerous international and regional arenas, and are largely reflected in successive UNEP's MTS and POW.

138.   The choice of working at city level was appropriate. The rules governing the distribution of powers in the countries concerned make them key players in improving air and water quality, notably through the regulation of mobility, zoning and land-use planning, waste collection, water distribution etc. It is not usual for UNEP to work on this scale, but the specific expertise of the UNEP Africa Office was being put to good use here. Furthermore, the project was in line with other intervention programmes, either by UNEP or by other organisations, such as the efforts to provide Addis Ababa with an Air Quality Management Plan (supported by the US-EPA), or those of the Stockholm Environment Institute on the issue of air pollution in Nairobi.

139.   In addition, the project's strong focus on the production of data on air and water quality responded to a very important challenge, that of the technical and human capacity of African administrations to carry out their missions of monitoring, regulating and enforcing environmental rules. It is known that air monitoring systems, in particular, are expensive to install but also to maintain. These budgets are rarely available in African countries, and some projects that have financed the installation of measuring stations have not enjoyed sufficient durability because of the cost of maintaining and renewing the equipment, which is generally neither covered by the participating countries nor by the donor. From this point of view, the project made intelligent use of the work of the Early Warning and Assessment Division (formerly Science Division) on the development of alternative means of measurement (including low-cost sensors and satellite data) and of available knowledge in the capacity of these emerging technologies to satisfy monitoring missions at a reasonable cost.

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[9] https://www.who.int/health-topics/air-pollution#tab=tab_1

140. Working with low-cost sensors (LCS) in the selected cities was particularly relevant and strategic for the performance and sustainability of the supported action. Indeed, conventional monitoring stations and their operation (consumables) and maintenance are usually related to high costs, which are rarely covered by national or local budgets once project type of funding is completed. Furthermore, UNEP, through its Early Warning and Assessment Division (formerly Science Division), could test LCS quality and select the best systems, which was useful in a fragmented landscape where there are technologies with different results. LCS are also mobile and allow measurements in different locations, or when a risk is identified in a certain location (e.g., near a factory). They were also a good tool for raising awareness including for decision makers, as they were used for in Nairobi.

141. The project also aptly took profit from and contributed to UNEP's effort to build a global digital environmental database, namely its World Environment Situation Room (WESR). This open platform serves both the goals of the organisation (ensuring a continuing flow of up-to-date global information on the state of the environment) and that of the national and local administrators when they seek, for instance, evaluation of where they stand in terms of the quality of their environment.

142. The project relied on a logical framework that was overall credible and integrated plausible mechanisms of action, although it relied on assumptions and drivers that were not all adequately articulated. The initially formulated outcome was coherent with the scope of the intervention and the means deployed. The proposed main activities were justified as the articulation to the attainment of the main outputs was plausible. Notably, the Project duly made a point in focusing on participating cities needs for capacity building.

4.8.2 Weaknesses

143. The project design had four important weaknesses.

- The project combined interventions in the fields of water pollution and air pollution despite the fact that these public policy sectors involve different stakeholders and face very different technical or political challenges. The ProDoc did not provide a clear rationale for addressing these two sectors in the same project. The justification for grouping these elements together under the common heading of environmental data production was proposed but it was not entirely convincing. It is in fact not possible to separate data production from governance mechanisms, institutional or even political considerations – something that was perfectly taken into account by the project in the case of Nairobi for example, on the subject of air quality. Moreover, the involvement of the Early Warning and Assessment Division (formerly Science Division) was essentially focused on air and had little to offer on water monitoring. Water quality appears to have been a late addition to the project and one that had not been as thoroughly prepared than the intervention on air. Despite notable efforts by the team in charge, this structural design flaw led to subsequent discrepancies in project implementation, with the Water aspect struggling to keep pace and deliver the expected results.

- The selection process that led to the choice of the three "pilot cities" was not presented in the project documentation. This choice seems to rely partly on manifestations of interest expressed by the cities, partly on the preferences and regional priorities of the donor, and partly on the opportunity to build on previous endeavours in the same domains. While it is neither unusual nor problematic that opportunities and specific demands help define the specific targets or partners of an intervention, in this case it raises various questions. As the project dealt with two domains, there could have been a better initial assessment of the willingness and readiness of the three cities to get involved in both of them with the same energy. Evidence suggests that in some of the cities, water monitoring was regarded as less a priority than air. Another question is the precise status of the city of Cape Town in the project. Given that this city was much more advanced than the two others in both domains, the rationale to make it a "pilot city" equal to the two others is unclear. No specific intervention suited to Cape Town's needs was mentioned in the ProDoc, and the whole logical framework seems to be essentially based on the needs of the two other cities. It seems that only in the course of the project implementation the specific situation of Cape Town was taken into account and that it was decided to use it more as a reference city. But how the project was supposed to bring positive change to the city, and how to maintain the level of interest throughout the project remained unclear. In the case of Cape Town, interviews made clear that the engagement of municipal and of other partners was finally much lower than expected, which led to reduced number of stakeholders, reduced participation to activities and missed targets.

- While air and surface water pollution pose a greater risk for different types of disadvantaged urban communities (including the inhabitants of informal dwellings), the project document did not propose any clear assessment of this aspect for the three pilot cities. Neither did it offer a strategy to address the issue of vulnerable groups, through specific monitoring strategies for instance, or through any other instrument of action. In addition, although the ProDoc correctly mentioned that women can be particularly affected by water and air pollution, the project design involved only minimal attention addressing this aspect. In the end, the issue was taken up only through the work of one partner, SEI, within one disadvantaged community in Nairobi. The project did not involve any gender mainstreaming strategy, gender disaggregated indicators or gender specific activities.

- While the project was centred on cities, the expected impact was to extend to the national level and to other cities. National ministries and national level technical agencies were listed as key partners in the project document, yet do not seem to have been involved in Ethiopia and South Africa. The three selected cities were explicitly referred to as "pilot cities", which entails a strong notion of experimentation and replication. However, the project's design did not offer a convincing replication or upscaling strategy. Presenting the project as a "proof of concept" led to the expectation that specific replication steps were defined, with challenges, factors of success, and impacts well identified, but this was not the case. Finally, also related to impact, the question of how to anticipate the durability of the benefits of the project in time was also missing. On this aspect, making air

quality information available for enlarged audiences was certainly important but missed the point of building connections with specific targeted actors such as the local or national scientific communities. The financial aspects of upscaling and supporting the sustainability of the project results also failed to be addressed.

Rating for Project Design: Moderately Unsatisfactory

4.9   Nature of the External Context

144.   At the time of project development, the question of the impact of pollution on health in the global South had been raised by a number of international players and donors, putting this issue on regional political agendas. Directly affected communities were also raising their voice or taking initiatives in some cases (i.e. Nairobi). Further, the three local administrations had demonstrated their willingness to develop public policies on the subject. With regard to the problem of water pollution, all three countries showed raising concerns at policy level regarding water shortage and hydric resources scarcity. However, due to strained public budgets, there was a persistent lack of resources to enforce environmental measures notably in Kenya and Ethiopia. Environmental objectives and restrictions were and remain today routinely weighed against economic growth and job creation in the context of emerging economies and a high job demand.

145.   The project implementation period was also marked by major disruptive events. On a global and regional scale, the COVID-19 outbreak led to significant restrictions on international travel. It was possible to compensate this through videoconferencing, but the lack of physical meetings between stakeholders certainly reduced the understanding and momentum of the project. As an example of the COVID19 burden on the project, the technical inception meeting scheduled in spring 2020 in Addis Ababa could only take place virtually, and at a later date. Similarly, the three stakeholder workshops that should have been convened during the first year of the project had to be cancelled. Only the one in Nairobi was finally organized. The planned regional workshop with the three cities were equally postponed and later replaced by videoconference meetings. In this challenging context, it was probably more difficult to maintain stakeholder commitment and motivation, as communications with stakeholders in Ethiopia and South Africa were less frequent during this period. The outburst of the pandemic also supressed all foreseen activities that involved the participation of Chinese counterparts.

146.   Although some compensation measures were taken, such as having some of the meetings virtually, the impact of the pandemic on project activities was not fully compensable. This context (international travel restrictions) led to stronger stakeholder engagement in Nairobi compared with the two other cities, which helps explain the observed differences in results achievement between the three pilot cities. Ethiopia also experienced a crisis from 2020 onwards with the outbreak of the Tigray war, a factor of political instability.

147.   Working at city level means having to deal with the risk of a change in political majority due to the electoral cycles, and a difficulty of ensuring administrative continuity due to staff changes. Although this did not concern the national Focal Points, city staff turnover at partners levels also affected the project implementation.

Rating for Nature of the external context: Favourable

4.10 Effectiveness

4.10.1 Availability of Outputs

148.   The following assessment is made in relation to the reformulated outputs, as presented in the Toc at Evaluation (see Table 5).

Table 8: Availability of outputs assessment

Output	Indicator	Baseline/Target	Degree of achievement
Output 1 - The three target cities identify priority capacity building needs for areas of improvements in water and air quality monitoring	I1 - Number of cities for which a needs and gaps assessment is available to support the capacity building planning for urban air and water quality monitoring and facilitate reporting sustainable development goals, and national assessment processes	Baseline (August 2018): 0 Target: 3	This output was **partially achieved**. **For Nairobi and Addis Ababa**, needs and gaps assessment were produced and helped drive and plan capacity building initiatives **in the field of air pollution**. Technical inception meetings were organized in Cape Town and Nairobi during the first year of the project, followed by two Regional technical meetings aimed particularly at fostering peer-learning in a South-South perspective. Interviews provided strong evidence that these sessions allowed Nairobi and Addis Ababa's focal points to acquire new knowledge on available technologies, measurement and data management models for air pollution monitoring, to better apprehend constraints and risks, and to get a more precise picture of the needed budget for a city to run such systems efficiently in the long term. As for water, a water quality and pollution hotspots assessment was made available for Nairobi and Addis Ababa. RCMRD capacities in data collection and visualization were efficiently used for this task, although the organization's experts had to deal with the scarcity and discontinuity of data in these two cities, both for air and surface water pollution. The report offers a needed first, baseline, assessment of the situation. Existing room for methodological improvements and the multiplication and increased access to existing data for air would call for regular actualization of such assessments. In the field of water, a second report was produced for Kenya by an expert

			consultant. It offers a thorough description of the institutional landscape and policy network for the water sector, and makes an number of recommendations to improve monitoring and governance of the resource. This knowledge base is an appreciable result at the output level. However, failure to replicate the effort in Addis Ababa and Cape Town means that the output is only partially achieved. As for Cape Town, the first steps of the project revealed that capacity building tailored to the needs of the city was out of scope of the project. Cape Town was later used in the project more as a benchmark city rather than a target city.
Output 2 - The pilot cities have access to a model for air quality monitoring	I2 - A model for a city air quality monitoring system, hotspots analysis, including network for data sharing	Baseline (August 2018): 0 Target: 3	This output was **achieved.** Nairobi and Addis Ababa focal points have benefitted from specialised trainings in air quality monitoring methods and models. Networks for data sharing were set in place. Specialised personnel was trained in up-to-date technologies and resources (satellite, low-cost sensor, data correction and management, etc). Note that this output was not suited to the situation of Cape Town, which already had developed air quality monitoring capacities.
Output 3 - The pilot cities have access to a model for water quality monitoring	I3 - A model for a city water quality monitoring system, hotspots analysis, including network for data sharing	Baseline (August 2018): 0 Target: 3	This output was **not achieved.** Detailed assessments of the water situation were not made for Addis Ababa and Cape Town. A site visit to Cape Town was organised at the start of the project, but further activities in the field of water faced important challenges, notably the impact of Covid 19. This part of the project also suffered from a level of engagement by some partners in South Africa that was lower than expected. Insufficient preparation of the project in the water segment and insufficient readiness of the partners have had a negative impact here.
Output 4 - The three pilot cities receive institutional and technical support in urban air quality	I4 - Urban water and air quality indicator frameworks agreed and adopted by the	Baseline (August 2018): 0 Target: 3	This output was **partially achieved.** Nairobi and Addis Ababa beneficiaries have benefitted from up-to-date technical support in air monitoring strategies and methods. Data production workshops

monitoring and water management for data gathering, storage, and policy action	urban authorities and governments at relevant		included a high level, one week long, training in satellite monitoring offered by Georges Mason University (Washington, United States) in June 2019, to which the three FP took part.
	I5 - Baselines for urban air and water quality indicators in the three cities calculated and published on open platforms.	Baseline (August 2018): 0 Target: 3	No support was provided in the field of water for any of the target cities. As regards the support to policy action component, the adoption of an Air Quality Policy (2020) by Nairobi City County Assembly can be regarded as a key achievement of A5b project at output level. A positive factor for this success was the very strong engagement of UNEP Africa Office and relevant partners (SEI) with Nairobi MPs on the issue, relying on
	I6 - National level capacity building workshops undertaken	Baseline (August 2018): 0 Target: 3	pertinent use and leverage of UNEP added value regarding institutional benchmarking and environmental data provision. As part of awareness raising and training activities (and despite Covid19 constraints), the project's team and partners was able to organize two important workshops gathering MPs and air pollution experts in Mombasa that proved instrumental for raising the concern politically and setting the policy agenda. The policy action component was much more limited in reach for Addis Ababa. Addis Ababa had been already engaged for some years in the process of drafting an Air Quality Plan with the support of US-EPA and C40. A5b was not designed to directly take part to this policy, but rather to improve air pollution knowledge and data availability in a way that could plausibly contribute to strengthening the policy process. There is no evidence that this output materialized. The absence of impact in terms of policy making can be related to the lack of an equivalent political window of opportunity in this city. The larger distance between the project's team and partners and the city FP and authorities due to Covid 19 restrictions was an additional difficulty. Support to policy action activities were not suited to the needs of Cape Town. In terms of the indicators:

			I4 was **partially achieved for air**: an air quality framework has been under discussion as part of Nairobi County Air Quality policy, a regulation that the project contributed to foster. I5 was **partially achieved for air**. Some localised air quality data is presented on accessible platforms (WESR) but there are few measuring spots considering the size of the cities and they generally lack continuity. I6 was **not achieved**. There were no capacity building workshops undertaken at the national level as part of this project, although some activities in Kenya involved participation of stakeholders from other cities. There were no national level activities on water.
Output 5 - National stakeholders in the target cities have access to dedicated network platforms on air and water data and communities of practices.	I7- Regional workshop for National focal points and other key stakeholders participate in national environmental information networking to exchange knowledge and lessons learned on sharing and using water and air quality data for urban planning.	Baseline (August 2018): 0 Target: 3	This output was **partially achieved.** I7 has been **partially achieved.** Networking between specialists was improved as a result of the project. The three cities focal points maintain contact and exchange information. The project also contributed to the creation and development of a national Air Quality Network in Kenya, gathering specialists statewide. The output was only introduced in Ethiopia. This output was not achieved for water. I8. **Not achieved**. The evaluation team was not informed and could not find evidence of any contribution of the project with regards to reporting through national networks or lessons sharing.
	I8 - National network reports including lessons learned.	Baseline (August 2018): 0 Target: 3	

Rating for Availability of Outputs: Moderately Satisfactory

4.10.2 Achievement of Project Outcome

149.   The following assessment is made in relation to the reformulated outcome, as presented in the Toc at Evaluation (see Table 5).

Table 9: Project Outcome Achievement

Outcome	Indicator	Target
The three pilot cities (Addis Ababa, Nairobi and Cape Town) monitor air and water quality, comply with and enforce standards.	Number of cities that have monitoring stations established, technical trainings conducted and public bulletins and briefs published using qualitative data.	Baseline (Sept. 2018): 0 Target: 3 cities

150.   With regards to the project's outcome, the overall assessment is that it had not been reached at time of project closure, although some important steps had been taken in that direction. Given the bi-sectorial nature of the project and the specific difficulties faced by the water component, it appears important to elaborate distinct assessments about air and water activities.

151.   Regarding the Air quality component, important progress was made for Nairobi regarding both monitoring capacities and regulation strategies during the project period. There is evidence that the project outputs supporting air quality monitoring operations effectively contributed to this situation.

152.   In the case of Kenya, the 2013 constitution explicitly entrusts the counties to address air pollution. However, the lack of appropriate technical resources, as well as a precise legal framework to implement this responsibility explains why this monitoring was not fully operational. The project helped to address this problem by providing capabilities in two areas: data production and the development of a framework for political action. The project tackled these two dimensions at the same time, rightly considering them as strongly interconnected.

153.   Another strength of the project is that UNEP support was provided at a particularly opportune time, as the issue of air pollution in the Nairobi region began to gain interest in the political agenda. Nairobi stakeholders, particularly the members of the County Assembly, were therefore eager for information and capacity for action, and were thus supportive of the action. This is a skilful piece of work that was achieved, which highlights UNEP's strong added value when it manages to combine its capacity to produce and disseminate knowledge and scientific models, with governance work that is well informed of the region's institutional particularities.

154.   This favourable statement needs to be put into context, that explains why the progress made on institutional aspects only concerns Nairobi.

i.   As far as Addis Ababa is concerned, project contributions to air quality management are more difficult to define. This is partly due to a greater distance between the scientific and political agendas than in Nairobi, which didn't allow the project to replicate the approach and use similar windows of opportunity. The project indeed enabled an enhancement of technical capacity in Addis Ababa, including through the production of new data on air quality, the networking of players and data, and the support, in coordination with other stakeholders, of an ongoing process aimed at providing the city with an Air Quality Plan. These elements of success are not enough to ensure the project Outcome could be validated in Addis Ababa, but they do suggest that the project contributed to defining city processes towards air quality improvements.

ii.   As far as Cape Town is concerned, the uniform definition of the expected results for the three cities unfortunately did not take into account Cape Town's advanced status in terms of technological and administrative capacities for monitoring and regulating air quality. The more developed situation in Cape Town cannot be attributable to the project, since the city already had this status before the project was launched.

iii.   Further, the originally formulated outcome of "full capacities to monitor air quality and enforce air quality regulations" was not verified at the end of the project in Addis Ababa or in Nairobi. There were still many steps to be taken to achieve this result, for instance by enforcing concrete elements of the existing air regulations in these two cities. The discrepancy between results and ambitions was partly due to the difficulties encountered by the project during the period of COVID-19. But the result gap was also linked to overambitious targets from the onset: it was undoubtedly too optimistic to hope to achieve "full capacities" as they involve major changes in public action and decision-making processes that are as much political as technical. Notably, this objective theoretically had to be reached in just two years and with limited means. The project succeeded in implementing operational processes related to air monitoring issues, and in improving their local ownership. This already constitutes an achievement. Yet, the capacity of the project and of its technical partners to influence political decisions remained limited[10].

155.   The intention to develop an information platform for the three cities quickly evolved into the use of UNEP's World Environment Situation Room (WESR). This platform is already a primary tool for UNEP's geospatial data, data-driven assessments, foresights, monitoring, communications, and support to UN country teams and related Common Country Analysis (CCA).

156.   It made logistical and operational sense to exploit an existing data system associated to an open portal, which beneffited from maintenance support and well-integrated in the UNEP website. UNEP trusted WESR would be relevant for data sharing between the cities and their residents and support city governments to share and analyze their data towards enhanced information access, knowledge management and reporting. According to the

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[10] This was notably the opinion of political stakeholders in Cape Town

project, using WESR would support action to reduce air pollution levels in cities and impacts on health, climate change and ecosystems.

157.   Still, this was not translated into a lasting or increased use of an air/water information system from project stakeholders, for the following reasons:

i.   Air quality data that was being produced by the local sensors should have been at some point integrated into the WESR for the three cities. Yet this objective proved challenging, notably because brands of low-cost sensors use different data management systems (DMS) which need to be translated into WESR compatible data. Platforms operators need to ensure that collected data through the LCS are coherent with other available data for WESR, despite the use of potentially different DMS used across sensors.

ii. LCS also need to be continuously serviced otherwise may stop to be functional or to provide valid information (recalibration needs). This was notably a problem in Addis Ababa, where data collection was soon not ensured in some of the eight provided sensors.

iii. According to interviewees in Nairobi and Addis Ababa, the project approach did not consider city ownership over the display system of their own data (notably, when there is only a UNEP logo over it and no visibility of city efforts). The Focal Point in Addis Ababa also indicated they were aware of the platform only at the end of the project.

iv. There was also a lack of city endorsement over the information that is being displayed (including, when the fact that cities are characterised by poor air quality and this information is made accessible to the global public).

v.   WESR was not designed to underline city or national progress over time, promoting local ownership.

158.   From a UNEP perspective, the project team insisted on its efforts to ensure WESR technical updates, developments and improvements of WESR, e.g., through Drupal technology implementation (Drupal being a web content management software) and worry to see its data content growing over time. The development of the WESR, a complex system guided by seven key pillars[11], was understandably a UNEP priority, and indeed served the project objectives[12].

159.   Yet, focusing on WESR made the project counterparts dependent on the platform and its internal developments, which were out of their control. The use of UNEP's own platform also seems to have created a gap between city stakeholders expectations over dedicated information platforms, associated with local technical developments and

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[11] Including: Geospatial Technology and Knowledge platform, MEAs, Scientific Information on the Environment, GEMs, Citizen science, Strategic foresight and Global Environment outlook and Scientific assessments.
[12] A dedicated page has been created in WESR to feature the information on the African Cities Air and Water quality. https://wesr.unep.org/article/african-cities-air-and-water-quality

potential political gains, and the final result on a single global website with no visible reference to their work.

160.   Where low-cost sensors (LCS) were used to expand air quality monitoring networks, the project also recommended cities to follow specific training to understand the utility, deployment, maintenance and data management related to the use of such equipment. This was relevant, to improve LCS sustainable use, and as local governments in the pilot cities expressed the need to reinforce calibration and the association of low-cost sensors with trustful reference equipment.

161.   Even if the advantages of using LCSs (notably in terms of agility and flexibility, relevant in towns with limited technical and financial resources) were probably greater than the related disadvantages, these drawbacks should also be identified, and reflected in the risk framework or in the response activities. Indeed, the efficient use of LCS usually also implies access to at least one (fixed, and expensive) reference station to ensure calibration and check that the data produced are not outliers. Further, LCS cannot be used to apply legal rules, because they do not meet legal standards. In the case of Nairobi, where one of the political issues was to give the city the capacity to penalise excessive industrial emissions, the use of LCS should have been accompanied with fixed stations. Finally, other challenges identified by interviewees (including: electricity and connectivity issues, security issues, sensor durability, …) could have benefitted from explicit "lesson learned" from the project, e.g. in the form of documented guidance. Project team members indicated such a guidance was existing, yet it was not made accessible to the Evaluation team.

162.   In 2021, Cape Town led two training/knowledge sharing sessions with the other "pilot" cities, on Reference and Equivalent Methods for measuring air quality, as well as on the planning and budgeting for equipment, staff, maintenance and repair for air quality monitoring units. These were based on practical approaches and approved standards for air quality monitoring[13], which was relevant. The project anticipated that the cities would capitalize on this knowledge to meet their legal obligations on air quality management, but this assumption was not realistic.

163.   **Regarding water**, there is no evidence that any progress was made in terms of monitoring water quality or access to quality water in any of the target cities. In Addis Ababa and in Nairobi, studies reinforced the knowledge base related to the water situation and the location of pollution hotspots. Nairobi also benefitted from the production of a detailed report on the current institutional and policy framework and the formulation of recommendations for improvement. But this remains insufficient to ensure routine monitoring and enforcement of adequate water quality and quantity regulations, as a result of the project outputs.

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[13] Including: equipment procurement and tender process, air quality monitoring standards and regulations including hardware and software, siting and deployment, calibration, data collection, analysis, visualization, data quality assurance and control, data storage, financial modelling and how to sustain air quality monitoring networks.

164.   The reasons for this failure relate to project preparation weaknesses, notably in the choice of the partners in the water sector. Water management was already highly institutionalised in the three target cities. It involved a wider variety of stakeholders than air quality management. Working with water stakeholders required specific intervention logics and highly specialised inputs, that could work as true incentives for these stakeholders. This is why both incentives, and water stakeholders as intended targets, need to be carefully chosen to ensure the action creates willingness to support meaningful changes in the sector.

165.   Because of its overly broad scope, compounded by the communication and operational difficulties related to COVID-19, together with an unexpected and unfortunate disengagement on the part of the South African partners, the project was not able to make noticeable progress in the water sector in any of the three cities.

> **Rating for Achievement of Project Outcome: Moderately Unsatisfactory**

4.10.3 Likelihood of Impact

166.   The project originally did not feature any results at the intermediate state or impact level, but it made reference to two expected accomplishments of the Pow as the ultimate goals of the intervention. As the expected accomplishments appeared logical and consistent with the envisioned outcomes, the TOC at evaluation selected them as pertinent intermediate states for the project. Intermediates States for this project were:

- *Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action*
- *National emissions sources identified, policies, legal, regulatory, fiscal and institutional frameworks and mechanisms for the reduction of air pollution developed, institutional capacity built for improved air quality, and air quality assessments done by countries with UNEP support*

At the same time, following UNEP results definition principles and basing on the project's overall rationale and strategy, the impact was redefined as: Improved public safety and health (see Table 5 – Reconstructed theory of change).

167.   The assessment of likelihood of intermediate states and impact was dependent on whether the direct outcomes were fully achieved or not, the assumptions on the causal links were holding true, and the external drivers were playing their role as expected. This assessment was done through a calculating table provided by UNEP (Evaluation tool 15 – Likelihood of impact).

168.   The Drivers to support transition from Outputs to Project Outcomes are mostly not in place. Driver 1 (*Needs and gaps assessments provide sufficient information to cities to build relevant capacity and implementation models on air and water quality monitoring, adapted to the needs and priorities of each city*) does not hold true for Cape Town, due to the important differences between this city and the two others. Driver 2 (*Gender sensitive approaches are considered in all activities, in stakeholder involvement and in access to*

gender-disaggregated data) does not hold true generally, with the exception of some activities in Nairobi that integrated some aspects of a gendered approach of Air quality exposure. Driver 3 (*Enhanced awareness and improved knowledge facilitate adoption of the proposed models by national stakeholders*) only holds true on logical terms, as it has not materialised in the course of the project.

169.   The assumption connecting the outputs to the outcome was verified regarding air pollution (Assumption 1: *cities are willing to perform regular air and water quality monitoring using the devices, methodologies and platform promoted by the project*).

170.   The fact that the project outcome was only partially reached bore a heavy weight on further foreseeable impacts of the intervention. It is important to make a distinction between activities related to air and water. On air pollution, appreciable success of the project regarding the development of technical capacities at city level and adoption of a legal framework at the level of Nairobi City County Assembly (which will probably be regarded as a reference nationally) meant the prospects were rather good for reaching the second intermediate state (*National emissions sources identified, policies, legal, regulatory, fiscal and institutional frameworks and mechanisms for the reduction of air pollution developed, institutional capacity built for improved air quality, and air quality assessments done by countries with UNEP support*). Yet, in reality, this second intermediate was not fully reached.

171.   The development of technical capacities in the city of Addis Ababa, as a result of the project, also lays the ground for further initiatives on the institutional side, both locally and nationally. This positive view is backed by the fact that assumption 2, linking the outcome and the intermediate states, did not face any refutation during project implementation (A2: *Stakeholders agree to share air and water data and related information and discuss their role on air and water management at national level*).

172.   The first Intermediate State was more general and focuses on the improvement of the data-policy interface (*Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action*).

173.   This expected accomplishment/intermediate state is common to projects A5 and A5b, and it is most reasonably through the conjunction of their outcomes, rather than as a consequence of project A5b alone, that this objective was expected to be delivered. In any case, this Intermediate State remained not fully achieved at project A5b closure, although it did contribute to pave the way towards positive accomplishments. For instance, although air quality information today remains incomplete, governmental actors in Kenya and Ethiopia are more aware of the situation of urban air pollution thanks to the project's data production component. The reality, however, is that air and water data collection and use in the two countries remain insufficient, and information is not communicated easily and transparently to the wider public. Stakeholders and experts among the local administration still do not refer to the data communication platforms supported by UNEP (as the WESR) such as a reference tool in their daily routines. Water information remains particularly scarce and does not provide an adequate basis for

identifying emerging issues or foster policy action. As regards the water sector, lack of results at the outcome level meant the intervention was not in a capacity to bring any significant change in the three pilot cities. However, some partners in Nairobi have expressed their will to resume activities in this field, as they recognized the relevance of the objectives and taking into account that positive changes in their institutional environment put them in a better position to engage in this sector.

174.   Absence of focus on the particularly marginalised communities meant that there is no specific positive impact that can be expected from this project on these groups, aside from the fact that any general reduction in air pollution or water pollution will impact proportionally more people in the lower classes of society that tend to be more exposed. The gendered approach was also very modest and undirect, which means that women would not benefit particularly from this project. Note that this intervention was very unlikely to have any unforeseen negative impact on vulnerable groups.

Rating for Achievement of Likelihood of Impact:	**Moderately Likely**

Rating for Effectiveness:	**Moderately Unsatisfactory**

4.11   Financial Management

4.11.1 Adherence to UNEP's Financial Policies and Procedures

175.   The information that could be collected on the project financial flows and procedures was very limited but did not show signs of any financial misconduct. Interviews did not raise any issue in this respect. UNEP's policies and procedures seem to have been fully applied.

Rating for Adherence to UNEP's Financial Policies and Procedures:	**Satisfactory**

4.11.2 Completeness of Financial Information

176.   The financial documents provided to the evaluation team tend to show that the project did not face any budgetary issues. However, while budget documents follow UNEP templates and procedures, the level of information required by these documents does not appear sufficient to provide a clear and informed view of the adequacy of budget management as required by the evaluation TOR. Generally, the nature of the financial documentation made available to the TE Team did not allow for an easy reconciliation between budget and activities. The initial budget lacked details (there are no budget notes explaining, for instance, the budgeting of equipment items, or the function of officers involved) and was not composed per component or outputs. It was composed by source of funding, but this is not relevant to have details on the nature of the costs.

177.   The format of the budget made it impossible to compare foreseen expenses and real costs at project closure by outputs. In addition, the precise amounts paid to implementing partners as part of externalised activities did not appear in the financial documentation and were not communicated to the evaluation team. Therefore, these expenses could not be assessed against the quality or nature of the deliverables.

178.   It was also not possible to check the validity of the declared nominative contributions of UNEP personnel listed as In-Kind contribution in the financial documentation, aside

from the core coordinating and managing staff. There was no financial audit carried out in the course of the project, as this was not required in UNEP procedures.

179. There was lack of physical evidence for a number of deliverables mentioned in the documents (e.g., the three "national reports on lessons learnt", guidelines for replicability, the three draft urban policies, mentioned in the final budget table). Some requests for complementary information made by the evaluation team did not receive answers.

180. Despite these important limitations, no evidence collected during the evaluation showed difficulties in financial management.

Table 10: Financial Management Table

NON-GEF AND GEF PROJECTS		
Financial management components:	**Rating**	**Evidence/ Comments**
1. Adherence to UNEP's/GEF's policies and procedures:	**S**	No direct evidence of financial misconduct, however gaps in financial information do not allow for a precise external assessment
Any evidence that indicates shortcomings in the project's adherence[14] to UNEP or donor policies, procedures or rules	No	Cf. above.
2. Completeness of project financial information[15]:	**MU**	
Provision of key documents to the evaluator (based on the responses to A-H below)		
A. Co-financing and Project Cost's tables at design (by budget lines)	Partial	Co-financing table was provided. Project costs table at design was not provided (according to the FMO, this cost table was not required at the time of project's approval)
B. Revisions to the budget	Partial	Some "revised budget" table provided but date is unclear and costs are not detailed
C. All relevant project legal agreements (e.g. SSFA, PCA, ICA)	Partial	The Strategic cooperation agreement with PRC and its 2020 amendment was the only legal agreement provided to the team. Contracts or agreements with

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[14] If the evaluation raises concerns over adherence with policies or standard procedures, a recommendation maybe given to cover the topic in an upcoming audit, or similar financial oversight exercise.
[15] See also document 'Criterion Rating Description' for reference.

			implementation partners were not part of the documentation provided.
D.	Proof of fund transfers	No	Not part of the documentation collected
E.	Proof of co-financing (cash and in-kind)	Yes and No	Co-financing by PRC in cash is evidenced. No UNEP procedure requires collecting details of In-Kind contribution (i.e. precise staff roles) in the course of the project. External confirmation of in-kind contribution was therefore not possible.
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes (but only by annual level)	Project expenditures are not sufficiently detailed. No budget by project component or budget line.
G.	Copies of any completed audits and management responses *(where applicable)*	N/A	No financial audit completed as this was not required in UNEP procedures.
H.	Any other financial information that was required for this project	N/A	Not provided nor requested
3. Communication between finance and project management staff		**S**	
Project Manager and/or Task Manager's level of awareness of the project's financial status.		S	No evidence/testimony of any issue in this respect
Fund Management Officer's knowledge of project progress/status when disbursements are done.		S	No evidence/testimony of any issue in this respect
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		S	No evidence/testimony of any issue in this respect
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		S	No evidence/testimony of any issue in this respect
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the evaluation process		MU	Some demands regarding complementary financial documentation were not answered
Overall rating		**S**	

Rating for Completeness of Financial Information: **Moderately Unsatisfactory**

4.11.3 Communication Between Finance and Project Management Staff

181.   There were no communication issues between Finance and Project Management Staff reported to the evaluation team.

Rating for Communication between Finance and Project Management Staff: **Satisfactory**

Rating for Financial Management: **Satisfactory**

4.12   Efficiency

182.   The lack of detailed financial information and of specific evidence on the use of financial resources from project stakeholders eventually hampered the assessment of project outputs compared to the investments made at financial and human resources level.

183.   The most detailed financial information made available for the TE is summarised in Table 5. While extrabudgetary lines did make a connection with project activities, in-kind staff costs were mostly not related to specific project outputs in the budget.

184.   Total staff costs represented about 59% of the project amount. Yet, some of these resources were not backed by specific justification on personnel activity, notably in the project reporting system. The TE team contacted all UNEP staff included in the stakeholder list, as well as the UNEP staff mentioned during the interviews. This leads to the assumption that all project related staff was contacted during the Terminal Evaluation. Nevertheless, information gaps remained regarding the nature and amount of tangible contributions that can be associated to staff costs.

185.   Counterparts in the three cities, however, underlined the dynamism of the project team notably at the level of the Coordinator and Project manager. These testimonies positively appreciated how the project team pro-actively led project activities, and a good level of commitment of UNEP individual agents.

186.   Through this dynamism, the project team ensured the timeliness of project execution. Despite the internal and external constraints (including, the complexity of the thematic areas and multiplicity of potential stakeholders notably, and the COVID-19 pandemic), project execution kept a steady pace. There were visible efforts made by the project team to complete activities in due time.

187.   The staffing information gaps are also related to a lack of evidence in the production or use of physical material, including reports and knowledge products. The main knowledge products that were materialized were informative leaflets (see Figure 2). Each of the three cities benefitted from the preparation of a leaflet (standard A4 size folded in three) on monitoring air quality and another one on monitoring water quality[16]. The leaflets were of good quality, with an appealing design and relevant information (for instance, on health impacts, sources of air/water pollution, …), backed by detailed data. Yet, stakeholders in Cape Town and in Addis Ababa indicated they were not using them

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[16] i.e., 6 leaflets were produced in total.

or haven't seen them being used other than at only one occasion, i.e., prints were piled on a table during a workshop, available to participants. The use of the leaflets did not seem to be particularly promoted by any of the Focal Points.

188.   Some purchased material was of utmost importance for the results of the project, notably the air quality sensors, which were pivotal in supporting project ambitions regarding increased data availability and capacity to influence local policies. The project made relevant efforts to support the procurement of the sensors, providing technical advice on the models to be used and on their related requirements including at maintenance level, so as to ensure they would match the cities' needs.

189.   The choice of using LCS equipment was part of a strategy to produce affordable, quickly accessible data. This successfully led the project to make tangible progress in relatively limited time, thereby gaining in credibility towards the stakeholders.

Figure 4: Examples of leaflets produced
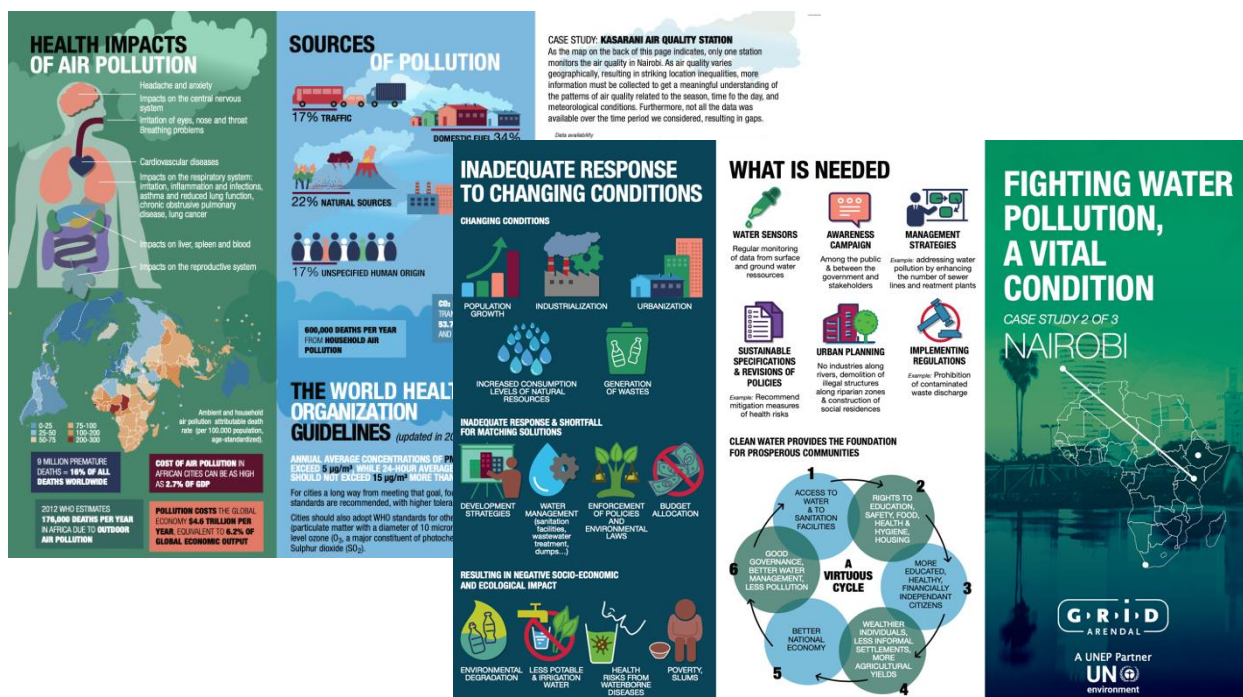
190.   The interviewed project stakeholders confirmed the overall relevance and the usefulness of the training content. Yet, the project did not foresee to have assessments directly made by participants after such trainings or workshops. These would have been useful in getting their direct and detailed feedback, including suggestions for improvements or for the contents of future sessions. According to Addis Ababa, such feedback would have underlined the need to organize follow-up webinars, to reinforce the training contents and cover more technical ground.

191.   The flexibility embedded within the project description allowed the project team to understand stakeholders' needs and adapt the activities to their expressed needs notably in terms of trainings and thematic webinars. It remains unclear, however, how the selected activities were prioritised against other potentially expressed requests.

Rating for Efficiency: Moderately Satisfactory

4.13 Monitoring and Reporting

4.13.1 Monitoring Design and Budgeting

192.   The project failed to establish formal and effective processes for internal monitoring and evaluation. No specific budget line seemed to have been dedicated to this task (as per the limited budgetary information provided). According to the ProDoc, it was anticipated that regular (weekly or bi-weekly) meetings between the UNEP Science Division and Africa Office would track progress of the project. As the minutes of such meetings were not communicated to the team, it was impossible to assess the reality and efficiency of this arrangement. Further, it would probably be insufficient to ensure the regular participation of stakeholders and beneficiaries to the project monitoring system.

193.   Indicators and targets formulated at project design were insufficient to have a detailed understanding of the project performance. Most targets related to the achievements of basic outputs of the project and lack granularity in their related targets, that would have shown the level of progress across the years. For instance, indicators included the number of regional workshops for National focal points (target: 3)[17]; or the number of cities for which a needs and gaps assessment is available (target: 3)[18]. In these cases, targets corresponded to minimal levels of activity for a regional project covering three cities. Since the project was based on the deployment of new air quality monitoring capacities in the "pilot" cities, a regular follow-up of the number of LCS deployed would have allowed a manageable, useful contribution to project monitoring. This information was collected and reported in formal reports, but there was regrettably no target set at design stage and the figure was consequently not used as a project indicator. Likewise, the number of data flows (i.e. the various types of pollution parameters for each sensor) effectively feeding the WESR data base from the "pilot cities" LCS was another missed opportunity for informing project progress and delivery of information.

194.   The adoption of a more detailed M&E mechanism at design stage could have helped the project's team in formulating more refined output indicators or, when needed, adapting them to project evolution during its implementation. It could also have served an eventual formal project revision, by capturing the changing reality and context e.g., due to the COVID19 pandemic outburst, the challenged posed by unexpected disengagement of some stakeholders, or any new directions taken (i.e. in awareness raising activities and policy work in Nairobi).   All indicators were output indicators, limiting the capacity of the monitoring system to report on outcome level result and, most importantly, at beneficiary level. The fact that indicators mostly related to basic deliverables can be interpreted as a simplified monitoring system with limited added value.

195.   As the monitoring approach did not relate to a description and classification of stakeholders and beneficiaries, the proposed set of indicators also lacked adequate measures on aspects related to gender, vulnerability or marginalisation. Such a specific approach was however relevant, as air and water pollution have disproportional consequences on specific populations (such as infants and elderly people, people living in informal dwellings, or people having activities in the vicinity of industries or congested roads). As the project did not seek to gather specific information on these groups, nor to have any specific impact on their livelihoods, the absence of adequate indicators in this domain remains another missed opportunity. Further, this approach was not aligned with

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[17] Full formulation is: Regional workshop for National focal points and other key stakeholders participate in national environmental information networking to exchange knowledge and lessons learned on sharing and using water and air quality data for urban planning.
[18] "Number of cities for which a needs and gaps assessment is available to support the capacity building planning for urban air and water quality monitoring and facilitate reporting sustainable development goals, and national assessment processes".

UNEP general recommendations that "stakeholders needs and interests be disaggregated by gender and representation (e.g. marginalised groups, indigenous people, etc.)[19]". The ProDoc used a double system of indicators with targets, and milestones. As both focused on outputs only, they seem to have had the same function and the rationale behind such a mix remains unclear. Some milestones did not have a clear target e.g., "Water quality monitoring points installed at hotspots in the three cities", which reduces the credibility of the project monitoring system.

196.   The initial indicators presented in the logical framework did not make a direct reference to any UNEP[20] or national indicators[21]. This would have given much value to the project monitoring approach. Indeed, the use of such reference indicators ensure data quality and consistency, as they rely on validated and clearly defined indicator, and comparability across projects. Further, the use of national indicators increases project's alignment with national policies, potentially feeding national statistics on developmental efforts and boosting stakeholder's ownership.

Rating for Monitoring Design and Budgeting: Moderately Unsatisfactory

4.13.2 Monitoring of Project Implementation

197.   Data on project progress was regularly collected from the main implementation partners   and reported through progress reports and a final report. Most of the available reports, which vary widely in size and substance, have been made available to the TE team. Workshops reports were also produced and communicated. This documentation evidences the existence of progress-tracking and internal reporting mechanisms. It does not however provide information about the use of a more formal M&E, and of related mechanisms for formal project adjustments. Minutes of meetings at steering level were not part of the communicated documents. Decision-making in the course of the project was likely achieved through informal exchanges and during internal team meetings. Team members indicated such internal meetings were organised on a regular basis (approximately, on a monthly or bi-weekly basis).

198.   These project monitoring mechanisms may not have been sufficient to ensure the timely delivery of outputs, particularly in a context where the initial milestones were not designed in the form of clear operational steps. This setting means the project team may not have been in a position to easily identify where and when the project would risk going out of track, particularly when faced with the extremely challenging context of the COVID-19 pandemic. It is probable that, in this context, the lack of a formal steering committee limited the capacity for strategic decisions that would have helped the project to reach its initial ambitions, or to formally revise and validate the stated goals. This situation certainly contributed to the failure to deliver expected results in some of the main dimensions of the intervention (e.g. in Cape Town generally, and for all cities in the water sector), at least as formulated at first.

Rating for Monitoring of Project Implementation: Moderately Satisfactory

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[19] UNEP Evaluation Office, Tool 10 : Stakeholder analysis in the Evaluation Process
[20] An exception could be made to the "relevant expected accomplishments" yet these cannot be interpreted as progress indicators.
[21] Or, in the case of this project, an approximation of national indicators that could be used in the three countries.

4.13.3 Project Reporting

199.   Available project reports are rather limited and do not allow to constitute an adequate corpus of information, and notably lessons learned, for such an innovative and ambitious project.. Reports were named (or designated, during interviews) in an inconsistent manner, and their function for formal project reporting remained unclear. The Evaluation Team was not informed of any specific requirement for UNEP to ensure a regular reporting to the Donor. The list of the reporting documentation made available to the Evaluation team is available in Annex IV (five reports in total, including only one progress report, one final report, and three short reports of three to eight pages, which seem to address specific needs such as the "answers to evaluation report"). The main available reporting document remained the final report. The latter related to a short needs and gaps assessments, the transcription of meetings with city stakeholders, which mostly occurred during the inception phase (pre-COVID), and a short description of the capacity building activities, of the Nairobi air quality policy framework, and participation to international conferences. The report did not provide details on various important aspects of the project's strategy, targets and achievement. For instance, it did not explain the relation between this specific project and the previous or parallel interventions by UNEP or UNEP partners in the same domains of air and water pollution, either in the three "pilot cities" or other regional cities. Lessons learnt from previous projects were not clearly articulated with the specific results of this project. The Final Report was also unclear on what could be seen as basic information for an air (and water) quality project. For instance, the final report did not state the number, time period and localization of the LCS deployed during implementation. Further, it did not explain the (non)achievement of results in the field of water monitoring and management. Also, it did not provide a clear description of the work done by some important partners, notably SEI and CEI. Overall, during its implementing period, the project documented progress where it existed (notably for air quality monitoring and the organization of series of workshops and trainings in the same domain) but lacked an internal analysis of challenges and difficulties, including the identification of potential obstacles on the water component, and concrete recommendations for the next working periods.

200.   Some documents related to project implementation and deliverables remained unavailable throughout the Terminal Evaluation. For instance, the Evaluation Team did not have access to the "Guidelines for replicability" that were mentioned in the Final Report or during interviews.

Rating for Project Reporting:	**Moderately Satisfactory**

Rating for Monitoring and Reporting:	**Moderately Satisfactory**

4.14   Sustainability

4.14.1 Socio-political Sustainability

201.   The project clearly raised or helped confirm stakeholder's (notably cities and communities) interest in enhancing air quality monitoring, develop data collection and analysis. The project rationale directly related access to air quality data to social, environmental and overall economic gains. Such a direct relationship should be recognised but can also be questioned, as air quality improvement requires a necessary public action including enforcement, before it is realised in practice. Yet, one of the clear successes of the project is to have convinced local institutions, including elected bodies, on the need to address air quality in urban settings. It also put a spotlight on technical

services in charge of air quality monitoring, and boosted their credibility in dealing with related issues.

202.   After the project end, the city of Cape Town formed a group comprised of non-governmental organisations and interested citizens, to be consulted and contribute any time to the city works on air quality issues. This corresponds to one of the milestones of the project ("Establish and strengthen urban stakeholder groups or Community of Practice (CoP) in application of water and air quality data in urban planning and environmental reporting"). Despite the fact that the TE could not establish a clear relationship between the projects' efforts and the formation of such a group, this underlines the relevance of this specific milestone.

203.   As for the water sector, activities were not sufficiently developed to raise interest and secure sufficient grip towards national stakeholders. Despite the fact that case studies were prepared, together with the building of a rationale justifying why investing on water quality monitoring, the approach did not seem to be sufficiently attractive to water stakeholders to ensure their meaningful participation, including at political level.

204.   Working in the water sector was however underlined as very relevant by political stakeholders including in Cape Town. The fast urbanisation and growth of informal settlements led to surges in land occupation close to water bodies, negatively affecting their quality. Cape Town City reaffirmed its capacity to show both technical and political support over water quality monitoring improvements.

Rating for Socio-political Sustainability: Likely

4.14.2 Financial Sustainability

205.   The maintenance related to the monitoring of air and water quality remains underfinanced at city level. The use of domestic finance to cover the existing needs for air has improved in one city (Nairobi), with clear commitments by the executive county administration to provide with new and sustained funding for monitoring stations. Yet, Nairobi remains heavily reliant on external funds for this activity.

206.   Domestic financing seems out of short-term plans and budgets in Addis Ababa, which seems to count only on external support. The Focal Point indicated its inability to ensure basic repairs or the recalibration of the sensors that remained operational, drastically limiting the collection of quality data. There was no impact or specific progress reported regarding water monitoring, even after the RCMRD studies were made.

207.   Cape Town is using its own funds to cover air quality monitoring, yet welcomes international cooperation to improve developments and innovations in the field of air quality monitoring. It was not possible to have information on water monitoring for Cape Town.

208.   The technical options that were promoted by the project tried to minimise maintenance costs. This was done notably by the use of an existing platform such as WESR, which is also supported by UNEP, and through the deployment of low-cost sensors, better adapted to the support capacities of the targeted cities.

Rating for Financial Sustainability: Moderately Unlikely

4.14.3 Institutional Sustainability

209.   Air quality control and regulation is usually under the mandate of public institutions. The project approach mainly involved such actors, and was hence fully relevant. This also

boosted the project potential for sustainability. In Nairobi, and to a lesser extent Addis Ababa, the project raised stakeholder interest, notably in cities and through citizen representatives and in local communities, in enhancing air quality monitoring. In Cape Town, it helped in validating and reinforcing existing efforts at city level for air quality, thereby justifying existing scientific activities in this area.

210.   In Kenya, UNEP worked with a range of well-established and motivated actors that have the capacity to implement awareness raising activities and make technical developments related to quality monitoring after the project. These include NCCG, SEI, RCMRG, Kenya Air Quality Network. The selected national counterparts for air quality (such as NEMA) are also relevant due to their mandate, yet may need to intensify their efforts to be recognised by local actors/governments and national networks and receive a more instrumental role in decision making.

211.   Unfortunately, the project was not successful in committing with local or national stakeholders related to water quality monitoring, at least for more than punctual meetings and engaging with them in the scope of a medium-term perspective. Hence, its objectives were not materialised, at least in the water component.

Rating for Institutional Sustainability: Moderately Likely

Rating for Sustainability: Moderately Unlikely

4.15   Factors Affecting Performance and Cross-Cutting Issues

4.15.1 Preparation and Readiness

212.   The lack of a detailed inception report (e.g., with an update of the methodology and a detailed workplan) made it difficult to assess if appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilisation. Further, there was no information available on potential adjustments made related to stakeholder groups, partners, or initial staffing and financing arrangements. The elements below therefore focus on readiness at the design stage.

213.   Weaknesses in the ProDoc are described in detail in the Design section. Notably, the inclusion of water as a main component wasn't well reflected across the document. The approach was not differentiated across the three selected cities, despite obvious differences in readiness. The objectives were not fully coherently cited in the various sections. The graph summarising the Theory of Change included elements that are external to the project. The monitoring system was not detailed nor based on a proper baseline.

214.   The project design should have used more in-depth knowledge on the situation in the three cities. Some relevant elements were known, as shown in the initial description, notably on main air and water issues (including access to water, main causes of air and water pollution, and related health issues). Yet, the situation on air and water quality monitoring could have been described with more detail, including specifics of ongoing practices, needs and priorities as finely as they could be assessed and described by the local stakeholders themselves.

215.   Further, the approach was initially designed to deal with air monitoring issues. It was then replicated for water. This approach did not take into account the fact that air and water quality involve very different stakeholders. Notably, water management can be

performed by private entities dealing with commercial services. As a result, and it is probably one of the main weaknesses identified at preparation level, the project used an undifferentiated approach across the three cities, and for both of its air and water components. The inception phase, which could serve to fine-tune the project approach through slight adjustments, could not be sufficient to make the needed changes in activities and which would have been more adapted to the situation (e.g., use Cape Town as a mentor for the other cities, adapt the project strategy for the water component).

216.   The main criteria justifying the selection of the three cities remained undefined. The interviewed stakeholders confirmed that their respective cities expressed an explicit intertest to be part of the project. Still, there were no documents or robust information related to the justification of their inclusion in the project.

217.   As a positive point, it is understood that the document also remained open to upcoming needs during implementation, thereby foreseeing and integrating operational flexibility in how to proceed to get to the initial outputs.

Rating for Preparation and Readiness: Moderately Unsatisfactory

4.15.2 Quality of Project Management and Supervision

4.15.2.1 UNEP/Implementing Agency:

218.   By remaining open to stakeholders needs from the onset, the project team successfully imposed a dynamic management style to the project. This was well received by the recipient stakeholders (i.e., the national Focal Points). Such a dynamism, notably from the Coordinator, maintained main partners (FPs) productive despite geographical and COVID-19 constraints.

219.   Being based in Nairobi, the project team led to more activities being implemented in Kenya, at a time when international traveling was nearly suppressed. This geographical proximity was particularly useful to make a close follow-up of progress in the promoted city air policy.

220.   Project activities were more diffused in Addis Ababa and Cape Town. The participation of Focal Points was more punctual than in Nairobi, and progress less evident. Overall, the absence of an adequate Steering committee and the structural weaknesses of the reporting and assessment process (i.e. poorly defined milestones, absence of fine-grained indicators) may have reduced the ability of the management team to adapt quickly to challenging situations, for instance to the difficulties met with activities in the Water sector.

Rating for UNEP/Implementing Agency: Moderately Satisfactory

4.15.2.2 Partners/Executing Agency:

221.   Implementing partners engaged actively with the project. In Nairobi, UNEP partnered with SEI, CEI, and Strathmore University to support local policy making in the field of air pollution. This collaboration proved successful, as each partner conducted activities and delivered results as expected. Strathmore University, Addis and SEI demonstrated their ability to convey two high-level, in-presence, workshops in Mombasa in the midst of the Covid19 pandemics and despite the associated restrictions. This has been noted and appreciated by the project management team and among the beneficiaries. These organizations shared their extensive knowledge of comparable experiences and

processes in the region and across Africa, a benchmarking approach that suited the interests of Nairobi County policy makers. Grid-Arendal visual productions (leaflets) were also recognized generally as a useful outreach instrument, yet probably underused in the case of Cape Town and Addis Ababa. Regarding the latter, the Evaluation Team did not find evidence that enough effort was put into a corresponding dissemination strategy, but this was beyond the responsibility of the partner.

222.   The engagement and distinctive expertise of RCMRD and consultant Prof. Krhoda have also been recognized. Their reports have been valued by UNEP and partners as particularly informative, and very useful pieces of information. RCMRD has signalled its will to participate in further activities in the same fields, noting that much more air pollution data (from both LCS and Satellite sources) was made available since the project ended, which would help produce refined baseline assessments of the situation in Addis Ababa and Nairobi.

223.   On the data production and communication side of the project, the Evaluation Team collected evidence of a strong engagement and numerous interactions with Grid-Geneva and the Yale Center for Ecosystems in Architecture. This collaboration permitted the integration of new data coming from the pilot cities to the WESR, which is now effective. Although doubts have been expressed on the day-to-day utility of this data visualization tool for city stakeholders, the partners involved in this aspect of the project fulfilled their role as expected.

Rating for Partner/Executing Agency: Moderately Satisfactory

Rating for Quality of Project Management and Supervision: Moderately Satisfactory

4.15.3 Stakeholders Participation and Cooperation

224.   The capacity of the project to mobilize stakeholders beyond its direct Focal Points was very limited in Cape Town and Addis Ababa. In these cases, Focal Points could be acting as solo players and main project beneficiaries, rather than as national coordinators of a large group of stakeholders. In these two cases, the project had a stronger impact at the level of the focal points, building individual capacities and enhancing their personal profiles, than for their respective institutions.

225.   In Cape Town, the association with NGOs and universities and citizen representatives never materialised. As a result, many of the entities in Cape Town listed as stakeholders by the project Team indicated they preferred not to be interviewed at all for the purpose of this Terminal Evaluation. Similarly, political stakeholders in Cape Town indicated they never met with project representatives after the initial kick off. They just assumed that the foreseen pilot activities were ongoing, including for the water component (which in reality, never happened) and recognised during the interview that they were not aware of any specific outputs of the project. Failure to engage stakeholders in Cape Town can be interpreted as the consequence of weaknesses in the design and planning phase of the project, which failed to adequately address issues relevant to the situation of the South African city, and to assess realistically the readiness of local actors beyond the FP to take part meaningfully in the project.

226.   More positive engagement was observed in Nairobi, where the Focal Point and the relevant actors among Nairobi City Administration directly contributed to the project activities. They demonstrated on multiple occasions their will to acquire new skills and capacities, engage in trainings and formations, share information and facilitate contacts

in order to ensure the smooth progression of the project. However, one limit to stakeholders' participation in Nairobi was that the intervention was not designed to train a large number of people. In most instances, and particularly technical training sessions, the Focal Point was in fact the only person taking part to the activity. While there is strong evidence that his individual skills have dramatically improved and that he is now in a strong position to advocate and lead the Nairobi City County's emerging Air Quality Service, questions remain as to the concentration of knowledge into his person. As regards the objective of building institutional capacity, and with relation to the intervention's efficiency, it would certainly have been preferable that more staff benefited from the same in-depth training. This is true as well for Addis Ababa's Focal Point, who was also the sole Ethiopian beneficiary of the technical training sessions.

227.   Other Kenyan stakeholders in the duty bearers category actively participated in workshops and trainings held as part of awareness raising and policy agenda setting activities. The project's Team managed to secure the interest and collaboration of two important elected members of Nairobi County Assembly, leading to the successful adoption of an Air Policy Bill and regulation. Other stakeholders also participated in consultations and workshops, such as the Kenya Air Quality Network, policy officers at the National Environment Management Authority (NEMA) and representants of the business community.

228.   It should be noted, however, that the project did not succeed in widening the circle of stakeholders beyond these institutional participants. As already noted, the ultimate beneficiaries of the intervention, and particularly the communities directly affected, were only marginally integrated into the project. Nor were gender issues adequately addressed. It should also be noted that the project created very few links with Kenyan scientific universities, despite some of which have expertise in air quality. Similarly, services such as the Kenya Meteorological Department were not involved in the project, even though they play an important national role in the field of air quality measurement.

229.   In the water sector, no stakeholder had a role to play in the project beyond the Focal Point appointed from among Nairobi City Administration staff.

Rating for Stakeholders Participation and Cooperation: Moderately Unsatisfactory

4.15.4 Responsiveness to Human Rights and Gender Equality

230.   Women, the economically disadvantaged and other groups affected by social and cultural inequalities are the most affected by water and air pollution. The project claimed that, by aiming at improving air and water quality, it would also somehow address Human Rights and Gender Equality concerns, which cannot be disputed. Yet, the focus of the project was put at a technical level. The lack of specific focus towards vulnerable groups made that activities were rarely formulated with specific considerations regarding inclusiveness. The project occasionally showed specific concern for Human Rights and Gender Equality (notably in relation with the Air Quality bill designing process in Nairobi) but did not make it a priority for all activities in all three cities.

Rating for responsiveness to Human rights and Gender equality: Unsatisfactory

4.15.5 Environmental and Social Safeguards

231.   The project aimed at improving air and water quality, to the benefit of the surrounding communities. It was mainly based on services and did not involve the construction or

rehabilitation of any new infrastructure. Its negative environmental and social impacts were therefore expected to be minimal.

Rating for Environmental and Social Safeguards: Satisfactory

4.15.6 Country Ownership and Driven-ness

232.   The project contributed to raising (in Addis Ababa, Nairobi) or reinforcing (in Cape Town) awareness on air quality issues, yet this was insufficient to kick-start subsequent change processes by national stakeholders themselves.

233.   While it was expected, at design stage, that National administration or agencies in charge of Environment (Kenya's NEMA, Ethiopia's EPA) take a role in the project's activities, their contribution remained minimal. In Kenya, NEMA agents participated in some workshops, and were kept informed of the project's progression, but their role was only observatory. In Ethiopia, they did not take part to activities neither. This is particularly regrettable as the project was labelled as a "proof of concept" which aimed at building avenues for replication and scaling up at the national level. Yet, no replication strategy was included in the project, and the role of National actors in this respect remained obscure.

Rating for Country Ownership and Driven-ness: Unsatisfactory

4.15.7 Communication and Public Awareness

234.   The communication between the focal points in the 3 cities worked well. There were regular contacts and the push for a community of practice led to few exchanges with other African cities such as Maputo, Gaborone or Kampala. This community of practice has remained active despite the closure of the project, suggesting this achievement have been sustainable through time.

235.   Further, there is strong evidence that the project increased awareness of city decision makers on air quality issues. This was notably the case during the inception phase when the project was presented at city level, with the presence of high-level city representatives (including, for instance, the City Mayor in Cape Town). In Nairobi, as already noted, communication with policy makers has been at the heart of the intervention, and it met with success.

236.   Project communication to the public had less results. It was inexistent in Ethiopia and South Africa, and was not set as a priority in Nairobi. However, some activities were dedicated to communication to a large audience, such as the leaflets and some information disseminated on web platforms. The project's final report mentions public relation activities held on the occasion of the 2nd International Days on Clean Air for Blue Skies, in 2021 (p. 86-88). Although this activity appeared as a valid opportunity to showcase UNEP's support to air quality initiatives in Kenya (along with a series of other private and public partners), it was not an activity that was designed and conducted as part of PIMS 2062.

Rating for Communication and Public Awareness: Moderately Satisfactory

Rating for Factors Affecting Performance and Cross-Cutting Issues: Moderately Unsatisfactory

5   CONCLUSIONS AND RECOMMENDATIONS

5.1   Conclusions

237.   The PIMS 2062 project's main motivation was to support African cities and countries in their efforts to improve air and water quality. This objective was (and remains) extremely relevant, as air and water pollution issues underpin major health, social and economic challenges that are still not adequately considered in many countries worldwide, and have specifically devastating impacts in the African continent.

238.   The project flexibility to local needs, and ability to navigate across external constraints (e.g., due to COVID19) was a distinctive feature of the project and a favourable factor that allowed achievements of some of the objectives. The tailor-made approach was particularly appreciated by the main project stakeholders. The cities Focal Points and interviewed stakeholders in Nairobi underlined the project capacity to address their needs, notably in terms of operational air monitoring capacity, and in delivering relevant training and webinar sessions.

239.   National Focal Points mostly expressed their satisfaction over their project participation. This was mainly due to the relevance of practical outputs such as the deployment of low-cost sensors for air monitoring, the contribution of the project to establish a knowledge base useful for their activities and policy-making, and the positive appreciation related to the ability to benefit from peer exchange with other African cities.

240.   Yet, some important weaknesses hindered the project effectiveness and potential sustainability and impact. Among these weaknesses were the adoption of an undifferentiated approach to the three selected cities, despite large differences in their needs, capacities and expectations. Another structural flaw was the choice to merge two sectors, air and water, into a single project pursuing the same targets, despite the fact that there are important differences in readiness and in governance systems.

241.   As a result, initial goals were particularly ambitious, notably when considering the wide scope of the project, covering two essential areas, the important needs of African cities, the national and international funding gaps on air and water quality issues, the differences in legal mandates across the three cities (e.g., air and water quality management is in the constitutional mandate of Cape Town, while air quality management in Ethiopia is covered through a National mandate, limiting the capacity of action of Addis Ababa), and the limited available means at project level. The Focal Points also recognised that the project community of practice, although useful and appreciable, was too small to expect fruitful exchanges on a variety of subjects.

242.   Eventually, activities mostly focused on air quality issues. This ultimately led the project to be unable to reach its initial objectives on both air and water components. Yet, focusing on air quality was relevant, due to the dire needs observed in the targeted cities, and due the emergence of a political window of opportunity at the level of Nairobi City County Authority. Combined to the project's in-built flexibility, this opportunity allowed to obtain quick and concrete results at city level.

243.   The overambitious design could only lead to a situation of under delivery at project end, particularly with regards to the Water component of the intervention. Still, some initially foreseen outputs that were not delivered remain relevant e.g., to work with local

interest groups in air and water quality and formulate a customizable and detailed upscale methodology that could be applied in other cities or at country level.

244.   The documenting and reporting systems showed some weaknesses. The details of project progress over time, and moreover challenges, were not always documented. This limited the quality of internal decision-making processes and also of transparency towards external stakeholders and the global public.

245.   At project end, there remained questions regarding financial (i.e., related to the maintenance of the equipment) and technical sustainability (notably, on the data feeding and stakeholder use of the web platform). The final report does not give any recommendation on how to achieve continuity, should it be as guidance for activity follow-up by Focal Points, or for a project second phase.

246.   As per the TOR, this evaluation specifically sought to answer 7 strategic questions. The answers to these questions are summarized below:

A. Why were two distinct projects (ID 2062 and ID 2061) designed? What were the advantages of designing two distinct projects? Did the foreseen advantages materialize during the project implementations? What lessons can be learned about the particular interlinked designs of these projects?

PIMS ID 2062 was designed as a "pilot project" more limited in scope than PIMS 2061. Its particular results in data production on air and water quality were expected to contribute towards the general objectives of PIMS 2061. Potential benefits of such a set-up included the exchange of best practices and cross-learning between peer projects, having multiple sources contributing to enrich PIMS ID 2061 objectives, or improved cost effectiveness. However, as project PIMS ID 2062 was the only project contributing to the objectives of project PIMS ID 2061, the intended benefits of creating a family of projects under PIMS ID 2061 never materialised.

The evaluation reveals a major flaw in this set-up. The priorities of PIMS ID 2061 oriented the project's construction towards the production of knowledge on pollution, as part of an early warning assessment strategy. They therefore justified and provided a rationale for the joint consideration of two very different sectors, water and air, in a single project, backed by the construction of a common knowledge base. However, this approach overlooked the significant institutional and policy-making particularities that differentiate these two sectors, as well as the fact that knowledge production cannot be separated from policy making. It led to a very difficult implementation, in one of the two sectors, that of water, which was less suited to the intervention than air.

B. What were, if any, the additional benefits and costs of the PIMS ID 2062 being closely related to the PIMS ID 2061?

An additional benefit of reuniting various projects under the same general umbrella program could have been to ensure a better convergence and capitalization of projects. The fact that PIMS ID 2062 was finally the sole project developed means it was not possible to assess the validity of such benefit.

C. What changes were made to adapt to the effects of COVID-19 and how might any changes affect the project's performance?

While efforts of the Project's Team to adapt to the effects of COVID-19 were recognised, the pandemic strongly affected project ambitions of experience sharing between the three targeted cities. While mitigation measures included the organisation of

videoconferences, these had limited knowledge sharing and capacity building possibilities, compared to presential exchanges. Yet, the project successfully remained active and available towards its counterparts.

D. In what ways, and to what extent, have the needs and interests of differentiated groups been considered in the implementation and monitoring of the project?

While the project recognised the needs of differentiated communities or unprivileged people, it did not foresee how and when different categories of right-holders could be directly taken into account. Rather, the project focused on cities as duty bearers toward their general population. It follows that at design as well as during implementation, the project generally failed to address the specific interests of vulnerable people or to allow their voice and concern to be meaningfully taken into account.

E. How could Water and Air Quality monitoring be linked with early warning and disaster risk management?

Considering the health and economic burden of air and water pollution for African societies, and particularly for the inhabitants of large cities, improving local capacities for the monitoring of urban air and water quality is a direct and important contribution to the well-being of people and the environment. Activities in these fields are therefore closely connected to environmental early warning assessment objectives and risk mitigation strategies. The project PIMS ID 2062 was perfectly aligned with these objectives

F. How could similar interventions go beyond sectors of water and air (e.g. pollution and waste management)?

Pollution is a cross-cutting issue which can only be monitored if applied to specific environments (air, water, soil, …) and linked to the proliferation of undesirable elements (plastic, particulate matter, gaseous pollutants, organic matter, pesticides, …). Water and air have the advantage to focus on a medium, which quality can be monitored. Any element disturbing pristine quality is basically unwanted, only tolerated below a set threshold. This makes monitoring and limit-value setting the two core elements of policy-making in this field. This feature puts scientific knowledge and observational data production at the centre of any intervention strategy. Yet those are resources that are expensive and generally in short supply in most African countries, hampering public policing on these issues.

Against this backdrop, the strategy adopted in this project was to rely on the political will and institutional mandate of local authorities to take a role in monitoring and abating pollution. This choice can be appropriate, as there are often powerful incentives at local level to take up the issues, as made visible in the case of Nairobi. Some cities also have financial and administrative capacities that surpass those of the national state. Interventions in other sectors, such as soil pollution, could follow the same strategy. Yet, chances of success are closely correlated with the existence of a political momentum, as, again, is demonstrated in the Nairobi case. Precise knowledge of the political situation and careful adaptation of the intervention were a very positive feature of this project and replication of this approach can only be encouraged.

G. What opportunities could be considered to upscale for more capitals and countries in Africa?

The project successfully built a short-term partnership between a small number of cities, one of them volunteering as a champion. Taking profit of this partnership, the Focal Points have engaged in a community of practice, which is beneficial to their day-to-day activities. This peer-learning approach probably can be replicated, through city clusters comprising leaders volunteering to support less advanced peers, in a South-South setting. Clusters could unite at least two capital cities with similar backgrounds (in size, or by their coastal/terrestrial nature, ...).

Opportunities for upscales could also be found in countries willing to reduce GHG emissions in their mobility sector or in other sectors[22], as expressed in their Nationally Determined Contributions. The NDCs are increasingly used for leveraging international support through climate finance, including through cities and partnerships between them.

247. Table 11 below provides a summary of the ratings and finding discussed in the previous sections. Overall, the project demonstrates a rating of **'Moderately Satisfactory'**.

Table 11. Summary of project findings and ratings

Criterion	Summary assessment	Rating
Strategic Relevance		**Highly Satisfactory**
1. Alignment to UNEP MTS, POW and Strategic Priorities	Clear alignment with MTS Subprogrammes 2018-2021: *Environment Under Review* and 2022-2025: *Science-Policy*. Contributes directly to the expected accomplishments of UNEP PoWs, notably EA (a): *Governments and other stakeholders use quality open environmental data that strengthen the science-policy interface to generate evidence-based environmental assessments, identify emerging issues and foster policy action.*	Highly Satisfactory
2. Alignment to UNEP Donor/GEF/Partner strategic priorities	By design, project is consistent with Donor regional priorities. It is also well aligned with Partners' strategic policy priorities in the three cities.	Highly Satisfactory
3. Relevance to global, regional, sub-regional and national environmental priorities	Involves a South-South partnership. Increasing urban air pollution and low water quality in large cities are recognised globally as pressing issues. The project covers various SDGs (3, 6). Ethiopia and Kenya have developed Air Quality Action Plans, reflecting specific concern.	Moderately Satisfactory
4. Complementarity with existing interventions/ Coherence	Project is complementary with (and builds upon) previous and parallel interventions by UNEP (Science Division, ROA) but also with existing initiatives in Kenya and Ethiopia by other UN agencies or external stakeholders (USEPA, C40...).	Highly Satisfactory
Quality of Project Design	Sound assessment of local governance mechanisms and issues in the fields covered. Relevant scale of action. Theory of Change based on plausible grounds. Yet, lacks links between Air and Water. Targets remained vague. Unrealistic ambition to influence policy in the three cities. Expectations re: replication or scaling-up could have been better developed.	**Moderately Unsatisfactory**

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[22] https://climateandhealthalliance.org/initiatives/clean-air-ndc-scorecard/

Criterion	Summary assessment	Rating
Nature of External Context	Air and water quality raised concerns among public actors and citizens, thereby becoming supporters of the project.	**Favourable**
Effectiveness		**Moderately Unsatisfactory**
1. Availability of outputs	Outputs 1, 4 and 5 relate to support services and capacity development delivered by the project and were partially achieved. Output 2 on a model on Air quality was achieved, yet the corresponding Output 3 towards a model on Water quality was not achieved.	Moderately Satisfactory
2. Achievement of project outcomes	There was visible progress in Air quality monitoring with influence on related policies in Nairobi and Cape Town. However, full capacities to monitor air quality and enforce air quality regulations are not in place at the time of project closure. There is no evidence that any progress was made in terms of monitoring water quality in any of the target cities.	Moderately Unsatisfactory
3. Likelihood of impact	Project support towards the enhancement of technical capacity at city level, the creation of a public policy network, and the backing of a political process aiming to take up air and water quality issues are factors of sustainability and impact. Yet, these were mainly implemented in Nairobi.	Moderately Likely
Financial Management		**Satisfactory**
1. Adherence to UNEP's financial policies and procedures	No evidence showed difficulties in financial management. UNEP's policies and procedures seem to have been fully applied, but lack of documentation hampers a sound assessment	Satisfactory
2. Completeness of project financial information	Financial information should be more detailed at the level of individual activities (e.g., detailed costs of specific outputs). Lack of information on role of staff presented as part of UNEP contribution. Difficult reconciliation between budget and activities, lack of physical evidence of some deliverables (e.g., national reports, guidelines for replicability).	Moderately Unsatisfactory
3. Communication between finance and project management staff	No evidence showed difficulties in communication between finance and project management staff.	Satisfactory
Efficiency	Lack of detailed financial information and evidence of physical products hinder project efficiency. Staff costs (59%) not backed by sufficient justification on personnel activity. Team efforts towards execution timeliness was underlined by counterparts.	**Moderately Satisfactory**
Monitoring and Reporting		**Moderately Satisfactory**
1. Monitoring design and budgeting	Simplified form of monitoring at design stage, with mainly Output indicators. Confusing system using milestones and indicators. No specific information was found re: monitoring budget.	Moderately Unsatisfactory
2. Monitoring of project implementation	Regular monitoring of project implementation is evidenced, but not in the form of formal monitoring feedback loops with clear decision-making processes	Moderately Satisfactory
3. Project reporting	Uneven project activity reporting, more focused on the progress on air than on the challenges met with the water activities	Moderately Satisfactory

Criterion	Summary assessment	Rating
Sustainability		**Moderately Unlikely**
1. Socio-political sustainability	The project raised stakeholder (notably cities and communities) interest in enhancing air (and water) quality monitoring. Social, environmental and overall economic gains are expected.	Likely
2. Financial sustainability	The activities incl. maintenance related to the monitoring of air and water quality remains underfinanced at city level. Use of domestic finance to cover the existing needs for Air has improved in one city (Nairobi) but heavy reliance on external funds remains. Domestic financing seems out of short-term plans and budgets in Addis Ababa.	Moderately Unlikely
3. Institutional sustainability	The selected national counterparts for air quality are relevant (e.g., by mandate), yet may need extra push/recognition from national networks (supposedly supported by the project) to play a truly instrumental role in decision making. No specific progress re: water.	Moderately Likely
Factors Affecting Performance		**Moderately Unsatisfactory**
1. Preparation and readiness	Built-in flexibility to adapt to oncoming needs during implementation. Lack of grip on the water sector (in the 3 cities).	Moderately Unsatisfactory
2. Quality of project management and supervision	A dynamic management style, which centralised structure led to diffused activities and results outside Kenya.	Moderately Satisfactory
2.1 UNEP/Implementing Agency:	UNEP Team maintained main partners (i.e., Focal Points) productive despite constraints	Moderately Satisfactory
2.2 Partners/Executing Agency:	Focal points could be acting as solo players and main project beneficiaries, rather than as national coordinators (notably for Cape Town, Addis Ababa).	Moderately Satisfactory
3. Stakeholders' participation and cooperation	Particularly limited (to almost inexistant) participation of the expected diverse sets of stakeholders in Cape Town, Addis Ababa.	Moderately Unsatisfactory
4. Responsiveness to human rights and gender equality	Lack of pro-activity in HR action notably in Cape Town, Addis Ababa.	Unsatisfactory
5. Environmental and social safeguards	Due to the nature of the project, its negative environmental and social impacts were expected to be minimal.	Satisfactory
6. Country ownership and driven-ness	The project performed well in raising (Addis Ababa, Nairobi) or reinforcing (Cape Town) awareness notably on air quality issues, yet this was insufficient to kick-start subsequent change processes by national stakeholders themselves (Addis Ababa, Cape Town).	Unsatisfactory
7. Communication and public awareness	Communication between peers in the 3 cities worked well. Awareness of city decision makers was improved. Project communication to the public and use of the platform showed mixed results.	Moderately Satisfactory
Overall Project Performance Rating		**Moderately Satisfactory**

5.2   Lessons learned

Lesson Learned #1:	Partnering with different cities implies using a differentiated approach across sectors (namely, in the water and air sectors) and city partners.
Context/comment:	One of the potential added values of the project was to address two different thematic areas of vital importance in three different city contexts. Project implementers and stakeholders duly realised that a methodology was needed to face air and water quality related issues. Yet, a blanket approach would not serve to reach concrete results. Indeed, the project intended to build air/water quality monitoring in three cities with different levels of readiness, as for instance there was only one air quality sensor in Addis Ababa, while Cape Town had a developed system already in place. Cape Town had been monitoring air quality since the 1960's. The city scientific services were closely associated to both on-the-field/operational services and policy work, through regular communication on recommended standards and methods to use. It also developed routines to ensure controls at management level. During the project, its role shifted towards a mentoring position for the two other cities. Further, Nairobi and Cape Town stakeholders indicated that raising the profile of water quality monitoring implied the recognition of the complexity of the sector and performing a deeper initial analysis of local stakeholders and their dynamics, before project start.

Lesson Learned #2:	To build the bridges that allow air and water quality monitoring to contribute to improved policy making, a specific strategy is needed.
Context/comment:	Improved policy making is one ultimate goal of air and water quality monitoring. The project initially assumed that air and water quality information would be used by public and private decision makers in order to reduce health related impacts. Yet the availability of data alone showed to be far from being enough to ensure influence over policy. As such, the project intention to influence decision makers and see tangible results at policy level was at risk. The initially foreseen project outputs were useful for operations related to air quality monitoring, but insufficient to influence decision makers. The bridge between science and policy making needs to be supported by a specific strategy.

	Cape Town political stakeholders and scientific services reaffirmed their willingness to promote good practices on air and water quality management using Cape Town as a case study. This shows there are existing or renewed opportunities to promote evidence-based policy making.

Lesson Learned #3:	There is added value in gathering evidence and building the case for improving water and air quality monitoring mechanisms.
Context/comment:	Lessons learned at technical and operational level were particularly appreciated by the Focal Points, who called for more exchanges and deeper coverage of technical subjects. By promoting a culture of science informed management at city level, the project built trust within a community of peers formed by city scientific counterparts. Within the group, this promoted a culture of producing robust data systems. Focal Points were incited to perform credible air quality monitoring operations, and to improve their practices in this area, for instance by making regular updates of baseline levels of local air quality. The regular collection and analysis of data led to the progressive understanding of the real importance and potential impact of air quality monitoring in the well-being of citizens.

5.3 Recommendations

Recommendation #1:	Due to the importance and relevance of working in the thematic areas of air and water quality improvements, it is strongly recommended that UNEP continues supporting air and water quality monitoring in African cities (during consultations, UNEP indicated that a proposal for a follow-up project was under preparation).
Challenge/problem to be addressed by the recommendation:	Project PIMS 2062 allowed to define a series of technical lessons learned that should be helpful for future UNEP supported actions in the fields of air and water quality monitoring, including the project proposal being currently prepared. The subsequent technical recommendations include: ▪ Involve more African cities and apply clear criteria to select the cities to be supported. The final list of selected cities could be constituted by a mix of more advanced cities in their air/water quality monitoring systems ("champions") and less advanced ones, or other types of beneficiary cities (e.g., according to how they are affected by air/water pollution issues).

	▪ Work with identified priorities such as polluting determinants (e.g., solid waste burning, agricultural/industrial production, transport, …) and cities' progress in adopting measures that improve air/water quality.
	▪ Adapt to city partners needs according to their progress in the value chain that goes form data collection, to policy making, and enforcement of the policies. Such a value chain could comprise the following steps: 1. Data collection (notably, based on the practical lessons learned available for PIMS project 2062 allowing proper use of LCS), 2. Data management, 3. Data analysis, 4. Translation into information that will help attaining set priority objectives, 5. Informing stakeholders including policy makers and the wider public through dedicated channels.
	▪ As for contributions to policy, there are two main considerations. The first is to use these contributions as the following steps of the above cited value chain, i.e. step 6. Influence decision makers and ultimately 7. Verify impact on environmental status. Yet, the above Lessons Learned also indicate that the bridge between available information and their use as contributions to policy should be the subject of a separate work stream.
	▪ Ensure that project informs stakeholders of the implications of such a value chain and fully involves a wider circle than the Focal Points. This should lead to the real creation of "national networks", as intended in project PIMS 2062, including decision makers, public health representatives and local voices as a leverage for improved policies and call for stronger mandates of national environmental agencies. Future projects in air and water quality should indeed promote a dialogue between environmental specialists and managers of air/water quality impacts including duty bearers.
	▪ Future projects on air/water quality would also benefit from an explicit mid/long-term ambition. Proposed implementation measures should be identified accordingly, notably by proposing specific outputs that strongly align with beneficiary needs (e.g. by improving their use of practical outputs including reliable data, networking, maintenance incl. sensor calibration, information platform, …).
Priority Level:	Low (Opportunity for improvement)
Type of Recommendation	Project level
Responsibility:	UNEP Project Team

Proposed implementation time-frame:	12 months

Recommendation #2:	Any follow-on or new project should explicitly identify Human Rights and Gender Equality issues specific to each locality where the project will focus, to define an adequate response strategy.
Challenge/problem to be addressed by the recommendation:	Air and water quality issues impacting the most vulnerable, the project somehow assumed that improving air or water quality would automatically benefit these groups. Yet, it would have been preferable to directly include special consideration to vulnerable groups including women in the project outputs.
Priority Level:	High (Critical)
Type of Recommendation	Project level
Responsibility:	UNEP Project Team
Proposed implementation time-frame:	12 months

Recommendation #3:	Any follow-on or new project should ensure that project reporting and transparency are integrated in project management routines in order to bring added value during implementation.
Challenge/problem to be addressed by the recommendation:	A strong internal monitoring and evaluation culture would be particularly beneficial to such projects, which themselves seek improving data and information systems to influence decision making. The use of regular reporting, even in simplified formats, would greatly improve transparency on progress made and allow managers to identify potential barriers and bottlenecks. Routine internal activity evaluation checks, such as trainings evaluations, allow participants to express their needs and improve not only the next training sessions, but also potential stakeholder ownership over project outputs.
Priority Level:	Low (Opportunity for improvement)
Type of Recommendation	Project level
Responsibility:	UNEP Project Team
Proposed implementation time-frame:	12 months

ANNEX I.   RESPONSE TO STAKEHOLDER COMMENTS

Response to stakeholder comments received but not (fully) accepted by the evaluators where appropriate

Page/Paragraph number	Reviewer	Comment	Response by the Evaluation Consultant
General Comment	Nada Matta (FMO)	Unfortunately, the only email that was received from was dated 28 December 2023. I was on Christmas leave and I had an out of office reply. Please provide evidence that the back-up staff were contacted as mentioned on the out of office or provide evidence of any follow up on that only email. Thank you.	The email sent on 12/28 listed documents that the Evaluation team would have wished to access so as to complete its understanding of the financial side of the project. This request completed earlier requests and made at a time when it became clearer that the financial documentation made available in the shared folders, or collected during interviews, was not detailed enough to allow the evaluators to answer some of the evaluation questions, which required detailed financial knowledge of the project. That request was not answered, indeed. The evaluation nevertheless proceeded with the available information, however signaling when it was difficult or impossible to make an informed judgement due to remaining information gaps.
Table 1	Nada Matta (FMO)	The Implementing Partners mentioned are those of A5 not A5b. while the PIMS ID mentions only A5b	The evaluand was the project A5b (PIMS ID 2062) as per the TOR. The list of partners is based on the Project Identification Table of A5b and was completed with the info collected during evaluation and in coherence with the inception report.
Table 1	Nada Matta (FMO)	Dates in the table also refer to the project A5 and not A5b	As indicated in the Terms of Reference, the evaluand was the PIMS ID 2062 (A5b) "Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa". With regard to the project dates

			and budget reported in Table 1 of the evaluation report, these clearly refer to the PIMS ID 2062 (A5b).
Table 1	Nada Matta (FMO)	Budget is that of A5 and not of A5b	As indicated in the Terms of Reference, the evaluand was the PIMS ID 2062 (A5b) "Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa". With regard to the project dates and budget reported in Table 1 of the evaluation report, these clearly refer to the PIMS ID 2062 (A5b).
Para 12	Nada Matta (FMO)	We have provided the financial information based on the requirements. No where were we asked to provide information on the role of staff or to provide the financial information at the level of individual activities other than in the 28 December email please see general comment above.	This statement refers to the fact that budgetary information made available through (standard) project reporting documents and folders shared with the team was not sufficiently detailed to answer some questions of the evaluation template. This is an invitation to standardize even more the level of info made available at closure of project and/or made available to Evaluation teams.
Para 13	Nada Matta (FMO)	Not sure why "lack of financial information" was mentioned here when we provided the requested financial information. Please see doc TORs_PIMS 2062 and 2061 (attached in email)	Same answer as above. The evaluators do not point to personal responsibilities in this paragraph, but rather to structural or procedural requirements related to evaluation needs that could be corrected in the future. Wording slightly revised.
Para 84	Nada Matta (FMO)	Please clarify, as there were no repeated requests for financial information related to initial budget, revisions and final budget. No details were requested unless I am misunderstanding. The only request was the 28 December email please see general comment above.	Sentence has been revised. There were previous requests made during interviews including with UNEP staff, but the paragraph has been rewritten since the intention of the evaluators is not to point to any individual wrongdoings, which is not the case and is not the point here. The point is about standardised financial information. (See para. 83).

| Table 7 | Nada Matta (FMO) | Disagree with the rating on the row I. I have dedicated enough times for the meetings and for explaining the difference between A5 and A5b, and still the evaluation title shows A5b when it should be A5. | Table 7 is on Project Design Quality. As per the TOR, the evaluators followed the template for assessing Design Quality (See Inception Report, annex. C). Row I (financial planning / budgeting) rating reflects the fact that "the communicated budget lacked details per outputs" and that "the total budget seems too modest, notably to ensure: 1°) full monitoring capacity in two major thematic areas (air and water) in three major African capital cities; 2°) Upscaling of the models in the two thematic areas at national levels; 3°) Practical support for policy making in the two thematic areas".

The evaluators did not see arguments to revise this judgement which is about the Design of the project.

The evaluators clarify that, as indicated in the Terms of Reference, the evaluand of this Terminal Evaluation was the PIMS ID 2062 (A5b) "Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa". |
| Para 143 | Nada Matta (FMO) | Last sentence: "The financial aspects of upscaling and supporting the sustainability of the project results also failed to be addressed." I was never approached with this question. | This point is related to the general design and strategy of the project and the way it takes into account replicability and sustainability objectives. It does not concern financial management. |
| Para 176 | Nada Matta (FMO) | The budget that was provided is the same as any other project that is created within UNEP, and as per the UNEP standard template (by funding sources – secured and non-secured) and is also cleared by PRC. Not sure which information is lacking and none was requested other than the one provided. The only request | The evaluators do not dispute the fact that the budget strictly followed the UNEP template. The point is that this standard documentation does not provide sufficient information with regards to the evaluation requirements. Wording revised here. |

		was the 28 December email please see general comment above.	
Para 177	Nada Matta (FMO)	This financial information is not only uncommon to be furnished to evaluators, but also if it was needed, was not requested from us. The only request was the 28 December email please see general comment above.	See the answer to the general comment. This point mainly signals a limitation to the reach and preciseness of this evaluation regarding financial management.
Para 178	Nada Matta (FMO)	UNEP as a whole does not have a mechanism to calculate the time that project managers spend on these projects, so how are we expected to produce it?	The evaluators note that the time that is expected to be spent on the project is calculated and aggregated as part of UNEP in-kind contribution, and included in the budget at the step of project approval. The evaluators' point is about the impossibility for the TE to assess the credibility/validity of this assessment, which would be useful for appreciating project's efficiency.
Table 10	Nada Matta (FMO)	2.A. There was no project costs table requested at the time of the creation of this project as it was not the practice and was not requested by PRC.	This information has been added as a comment in the table.
Table 10	Nada Matta (FMO)	E. again as para 178 second comment	Same answer as for para 178 (2nd comment). Wording revised.
Para 182	Nada Matta (FMO)	Not sure what does the conclusion (wrong) of lack of financial information have to do with the efficiency of communication between the Project manager and the FMO, and how it can hamper this assessment when there was no meeting arranged to assess the communication.	Communication between PM and FMO has been evaluated as satisfactory (following the evidence collected through interviews). See Para 181

Para 182 is not about the efficiency of communication. It is about evaluating the efficiency of the project's financial management. |

Para 183	Nada Matta (FMO)	There is no financial information in table 3. Moreover, we cannot assess staff against activities as these are in-kind and UNEP does not have the mechanism to do that. If the Evaluator is not referring to in-kind staff, then it is important to note that there was no extrabudgetary staff on this project.	Text should refer to table 5. This has been corrected. Evaluating with some precision in-kind contribution makes sense for evaluating project's efficiency.
Para 184	Nada Matta (FMO)	In-Kind staff are funded by core funds and	Evaluating with some precision in-kind contribution makes sense for evaluating project's efficiency.
Para 246	Nada Matta (FMO)	Not sure any question ever came on maintenance of equipment…	Precisely, this is the evaluators' point, having the sustainability of the intervention in view.
Table 11	Nada Matta (FMO)	Financial Management: 1. Not sure why it is moderately satisfactory if there was no difficulty in the financial management stated.	Taking into account the comments above, the rating was adjusted to Satisfactory
Table 11	Nada Matta (FMO)	Financial Management: 2. Cannot agree	Taking into account the comments above, the rating was adjusted to Moderately Unsatisfactory
Table 11	Nada Matta (FMO)	Efficiency: as addressed above please see previous remarks. Not sure why efficiency is uniquely financial and not substantive	Efficiency was assessed in accordance with the Evaluation template and guidance tools.
Paragraph 46	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	In regard to Cape Town, there were significant changes with the personnel during the project implementation and during evaluation including the untimely passing of the Director Ms Mparo who coordinated both the water and air component. In addition, appreciating COVID-19 the project implementation could not continue at the scale envisaged even though the initial	Thank you for this clarification. The evaluators recognise the very heavy burden of Covid-19 on project activities, including in Cape Town, which was duly reflected in many sections of the report.

		work plan agreed with the City captured the City priorities, responsibilities and timelines.	
Paragraph 48	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	Perhaps the reviewers can then appreciate the severe limitations in moving the project activities to virtual participation given the poor internet connectivity in part but nonetheless the engagement through the focal point continued with this very severely limiting situations. A mission to Addis Ababa would have yielded access to project information.	The evaluators are indeed well aware of the real limitations in moving project activities toward exclusively virtual activities. At the same time, these difficulties in reaching out to Addis Ababa's stakeholders may also be a testimony of the difficulties in maintaining engagement and responsiveness from the geographically distant partners through time.
Paragraph 67	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	In the Technical Report shared with the evaluators each implementing partners role is analysed. in addition, the workshop reports also shared with the evaluators give more details on each and every partner role. In Table 3: RCMRD through an iterative process with UNEP participated in the design of satellite use in water and air quality monitoring. Strathmore and ECI through consultations and iterations provided expert support on the legislative tools particularly in the drafting and passing of the Nairobi Air Quality Bill and Policy	Thank you for this precise feedback and information. It is important to note that Paragraph 67 deals solely with the information provided in the Project Document. The reconstruction of Stakeholders roles compared with the Prodoc was a key initial step for the evaluation and is exposed in details in the Inception Report. RCMRD, Strathmore, ECI roles are dealt with extensively in the present draft evaluation report, and they are indeed important. Regarding Table 3, the columns deal with the role of each stakeholder in Project Design (3rd column) and in Implementation (4th column). As regards universities (other than Strathmore), Meteo services, Health ministries, or civil societies groups (including C40, etc); the evaluators absolutely did

| | | Academia- We held numerous consultations and inclusion of the academic institutions in Cape Town, Addis Ababa and Nairobi including but not limited to University of Nairobi, University of Cape Town, GeoHealth hub group which is a consortium of more than 5 universities. The evaluators here acknowledge Strathmore university role but at the same time rule out academic engagement and yet this is a university.

National health Ministry: More than 50 health ministries engaged though the collaboration with WHO.

Civil society groups were engaged through the work with Nairobi County for example particularly in the public consultation process of the drafting and passing of the air quality bill furthermore if we also take civil society to include, business, NGOs and CSOs, a quick review of the workshop report will show the extensive participation and inclusion of these different groups including through umbrella bodies like KARA, C40 etc. Similarly, Meteorology services, KMD was also engaged in the technical working groups, and these are captured in detail in the minutes of the technical working group. | not rule out their participation through inclusion in workshops (particularly in relation with the Nairobi AQ bill). The evaluators rather simply noted that they did not have a substantive or specific role in project implementation tasks. |
| Paragraph 69 | Charles Sebukeera (Project Manager) / Aderiana Mbandi | The national environmental agencies were engaged including in Ethiopia the environment department, Kenya, NEMA, and Cape Town the | This engagement is precisely the reason why they are listed as major stakeholders. The evaluators wrote that, although engaged, they "did not directly took part to the project" because it was not |

	(Project Coordinator)	provincial western cape government which has oversight of the city.	expected for them to have this role at design, and because it is substantiated by interviews (with Nema representative for instance), the final technical report and other documents produced in the course of the project.
Paragraph 71	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	Contrary to the last statement each activity from the project directly recorded all the stakeholders their role and institutions while the workshop documents detailed further their roles. Vulnerability and injustice of air pollution was inherent in the project design and activities, implicit in the geography of this project and the design.	The evaluators did not write in this paragraph (nor elsewhere) that stakeholders roles and activities were not recorded in details. The assessment in paragraph 71 is formulated on the basis of the description of stakeholders in the Project Document, and in relation with the Evaluation guidance tools. In the project document, no detailed description of the impact of the intervention on right-bearings stakeholders is offered; although, as we note, an implicit positive impact on vulnerable communities is beyond doubt.
Paragraph 72	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	Each report and project outputs including pamphlets, briefings, presentations were shared with all stakeholders, this is documented in emails, calls and reports.	Of course, the evaluators do not dispute this. Paragraph 72 is only about the fact that project's impact on "bearing-right" stakeholders was not addressed (or not substantially addressed) in most of the project's documentation. Please note that the evaluators always considered the situation in the three countries. Hence, the evaluators' endeavour to find evidence of inclusion of and impact on these specific targets through other means (interviews, notably), in accordance with the Evaluation guidance tools and template.
Paragraph 78	Charles Sebukeera (Project Manager) / Aderiana Mbandi	Minutes for meetings with the City in the technical group are available, furthermore	This paragraph makes reference to potential meetings of a project Steering Committee or to what was expected to act as a substitute of it, that is the weekly meetings or the ROA with the Science

	(Project Coordinator)	reports from these meetings were also made available	Division. The evaluators did not find documents related to these meetings in the available documentation.
Paragraph 82	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The evaluators failed to take into account the complete shutdown of the Chinese counterparts during the pandemic. There was no communication possible with the Chinese counterpart. Furthermore, the assertion of Cape Town been a resource city only in this paragraph is in error. The technical report details the gaps in technical capacity of the City of Cape Town including use of near reference or sensors in monitoring, activities to bridge this gap were convened including the meeting held with the sensor manufacturer and knowledge sharing with the cities deploying the sensors.	Please note that paragraph 76 and paragraph 145 mention the very negative effect of the closure of communication with China. The text in paragraph 82 has been amended to underscore this impact of the pandemics in this section as well.

The categorization of Cape Town as having finally played the role more of a "Resource city", rather than a target city was inspired by interviews with members of the project's team and we felt was substantiated by interviews with national stakeholders, including in Cape Town, notably when they describe the peer-to-peer knowledge discussions they have had. The evaluators also noted the role of Cape Town as providing training to the other cities in various workshops, and use by other cities as a reference, whereas it did not take part in other training sessions (see for instance Technical report, p. 66). It is also in line with the final results of the project, where Cape Town does not appear as an evident beneficiary of the intervention, as compared with the two other cities. However, the evaluators understand that this differs from the understanding of the project team and have corrected the paragraph accordingly. |
| Paragraph 112 | Charles Sebukeera (Project Manager) / Aderiana Mbandi | The evaluators do not take into account the inclusion of the different groups through the public participation process for example to pass a bill in the local assemblies which dictates a | This is true, but the evaluators' understanding is that this inclusion process is dependent on Nairobi |

	(Project Coordinator)	minimum threshold of inclusion of different groups including informal sector.	City County legislative procedure, which is not related to this project's design or strategy.
		Again, they do not take into account the inclusion of civil society in the project implementation who represents the various marginalized groups	Aside from this legislative procedure, the evaluators did not find convincing evidence of a specific / explicit strategy to include the voice of the marginalized communities (or any sub-category) in the project's design, or implementation. The Final report does not have a section on the matter. Vulnerable groups are mentioned only in the context of the preparation of the Nairobi AQ Bill, as an aspect raised by County stakeholders. Please note that the evaluation also considered the situation in the three cities, for air and water. This assessment is made in accordance with the Evaluation guidance template and tools.
Paragraph 113	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The technical report provides a clear rationale for taking complementary and cross cutting clean water and air actions from a rich scientific literature	The evaluators disagree with this assessment. The Technical report provides generic background on urbanization trends and pollution trends in the three cities, which is indeed important knowledge to take into account. However, the report does not explain the rationale behind addressing both domains in the same project. Neither does it describe the different policy frameworks in which air and water issues are embedded. There are obvious differences in how air or water quality are managed, and these were not taken into account. Further, the diverging development paths of the air and the water component in the course of the project does not

			help substantiate the idea that their grouping was an added value of the project.
Paragraph 118	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	I do not see the relevance of inclusion of the statement in an evaluation, waste is a sector relevant to both water and air pollution	This paragraph seeks to answer the specific evaluation question addressed to the TE team (quoted in 4.6.6 above the paragraph: "How could similar interventions go beyond sectors of water and air (e.g. pollution and <u>waste management</u>)?". The evaluators simply observe that similar interventions based on technical inventories and targeted policing strategies at the local level could be designed to address the issue of (solid) waste reduction.
Paragraph 119	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	This was included in the technical report	The evaluators therefore agree on how to set monitoring priorities.
Paragraph 121	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The project includes consideration of integrated action of air pollution and climate change	This paragraph is a suggestion about replication/expansion opportunities inspired by the project. Integrated action on air pollution and climate change did not have to be a key feature of A5b. It seems it is more directly addressed in the project "Africa Integrated Assessment on air pollution, climate change and sustainable development" which appears to build partly on A5b experience.
Paragraph 131	Charles Sebukeera (Project Manager) / Aderiana Mbandi	This statement seems one without any merit as it is not supported by any citation where else the technical report shows the need to develop	This paragraph seems to have been misunderstood as it does not contest the need to develop capacities and the technical challenge faced by

	(Project Coordinator)	capacity and the challenges both countries encounter in combating air and water pollution	these countries. It makes the observation that at the national level these issues have not been flagged as among the most pressing priority (as in virtually any country, aside maybe China in the recent years). The evaluators write that this makes the agenda setting strategy underpinning the project even more relevant. This is not a negative statement regarding the project.
Para 133	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	Disagree, this is clearly stated in the technical report	The text refers to the ProDoc, not the technical report. Those are of course different documents.
Para 143	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The rationale for the selection of the city was in the introduction section of the technical report. The replication framework is represented in the technical report.	The introduction of the Technical section gives some information about urbanization and population trends for these three cities, but it does not provide a justification for the selection of these cities among other possibilities. Notably, previous collaborations with UNEP or other multilateral actors, policy frameworks for the two domains, public policing in air and water at the national or local scale, the type and state of the monitoring networks, levels of readiness nationally and locally to take up the issues, are not addressed in a structured manner. As regards replication, it is implicit and occasionally explicitly touched upon in the report, but is not presented in the form of a coherent strategy, as could be expected from a project presented as a

			"pilot" project. The Final report has no section on the matter.
Para 166	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	Air quality regulatory tools were built, and the policy, plan and act were passed through legislative process through use of scientific evidence gathered, shared from this project	The evaluators fully agree with this, and there is no objection to this idea in paragraph 166.
Para 174	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	This point about the lack of inclusion of margilized groups has been belaboured but does not hold true to the project implementation including the inclusion of NGOS, CSOs, civil society and the Cities own public participation including marginalized groups	The evaluators' assessment about the inclusion and impact on marginalized communities is commanded by and made in accordance with UNEP Evaluation guidelines. The project has a lot of merits which are emphasized in the evaluation. However, the evaluators did not find evidence of any strong methodology to involve specific, vulnerable, categories of the population in the three cities. The evaluators note that when the issue of marginalized groups was taken into account, it was either through participatory process related to the AQ bill (also when the issue was voiced by some Members of the County Assembly) or through the (preexisting) work of SEI that include interventions on air quality in one informal settlement in Nairobi. There was clearly no specific approach in the other cities. The NGOs cited in the stakeholder lists for Cape Town explicitly refuted any participation in the project. Further, the issue of impact on marginalized communities is not explicitly dealt with in the final report.
Para 197/198	Charles Sebukeera (Project Manager) / Aderiana Mbandi	All reports and work outputs including, leaflets, media (including photographs), workshop	These two paragraphs have been rewritten to better take into account the transmission of complementary documentation about internal

	(Project Coordinator)	outputs were all provided in a folder clearly labelled for ease of use for the evaluators.	reporting in November 2023, and then on March 15, 2024 (i.e., only sent after the submission of the draft final report, despite the many earlier requests for information). The revised text aims to reflect more precisely the breadth and nature of the project documentation made available, and analyses the likely consequences of the M&E mechanisms used by the project's team.
Para 200	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	To demonstrate the lack of validity of these statements, we can demonstrate the national reports were shared and are even cited in this evaluation report.	There may have been some misunderstanding here about what documents the evaluators believe could be described as "National reports". To avoid any further misreading, this paragraph has been edited.
Para 213	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The inception report was shared for the air component.	Reporting on the Inception meeting can be found in the progress report of June 2020. Here again there may be a discordance of interpretation due to some variability in the designations of documents.
Para 221	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The progress for the other cities is detailed in the Technical report including joint regional workshop held virtually with the participation of Addis Ababa and Cape Town	The technical report is very succinct regarding progress on air quality in Addis and Cape Town, when compared to the stated goals of the project.
Para 231/232	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	The evaluators make invalid assumptions and perhaps if they reviewed the role of the technical working group formed for the formulation of the legislative tools and the city's own public participation process, they would understand the breath and length of the inclusion of the	See evaluators' answer to comment on paragraph 112. This assessment takes a global view on the project, including its general design and stated objectives. Inclusion of marginalized groups is of course a positive aspect of the intervention around the AQ bill, but the evaluators do not find evidence of a similar approach in the other aspects of the

		marginalized groups including youth and women. Such a statement is not only incorrect but would invalidate the policy tools accomplished through this project and incur for all unforeseen impacts including city and national government authorities	project. The paragraph has been revised to describe with more precision the positioning of the project in relation to inclusiveness.
Para 243	Charles Sebukeera (Project Manager) / Aderiana Mbandi (Project Coordinator)	National agencies were included in the implementation of the project see response in Para 69 Furthermore, the project outputs are now fully owned by the city environment authorities and various other groups including, Athletics federation, NGOs and civil society, media groups, residence association etc	As for national agencies, interviews and testimonies collected tend to show they were clearly associated and consulted but did not play a role in implementation of project activities (and this is not necessarily an issue). As for the project outputs among various groups, the evaluators don't dispute this in paragraph 243 (nor do in the others).

ANNEX II. PEOPLE CONSULTED DURING THE EVALUATION

People consulted during the Evaluation

Organisation	Name	Position	Gender
City of Cape Town	Haithum Wingrove	Technical Manager / National Coordinator	M
City of Cape Town	Ald Xanthea Limberg	Mayoral Committee on Water	F
City of Cape Town	Shadley Mackenzie	Head, Specialized Environmental Health	M
City of Cape Town	Dr. Denver Van Schalkwyk	Manager, International Relations	M
UNEP	Charles Sebukeera	Project Manager	M
UNEP	Alexander Caldas	Chief of Branch	M
UNEP	Aderiana Mbandi	Project coordinator	F
UNEP	Sean Khan	Project officer	M
UNEP	Patrick Mmayi	Project management officer	M
UNEP	Nada Matta	Fund Management Officer	F
Nairobi City County	Lawrence Mwangi	National Focal Point - Kenya	M
Nairobi city County	JP Malawi	Director for Environment	M
Nairobi city County	Margaret Kariuki	Formerly in charge of air quality	F
Nairobi County Assembly	Waithera Chege	Former Majority Whip	F
RCMRD	David Ongo	SIG Analyst – Project leader	M
RCMRD	Julius Buyengo	SIG Analyst	M
Strathmore Law School	Dr Francis Kariuki	Professor	M
SEI	Philip Osano	Director	M
Environment Compliance Institute	Gerry Opondo	Director	M
Kenya Air Quality Network	Nthussi Victor	Air quality expert	M
NEMA	Sellellah Okoth	Policy Officer – Air Quality	F
Consultant	George Khroda	Professor, Water expert	M
Environmental Protection Agency in Addis Ababa	Gutama Moroda	National Focal Point	M

ANNEX III. EVALUATION FRAMEWORK/MATRIX

ToR.	Evaluation questions	Indicators/criteria	Data sources
		KEY STRATEGIC QUESTIONS	
P13	Why were two distinct projects (ID 2062 and ID 2061) designed? What were the advantages of designing two distinct projects? Did the foreseen advantages materialize during the project implementations? What lessons can be learned about the particular interlinked designs of these projects?	• Context of formulation. • Evidence of complementarity and coherence between the two projects.	• Interviews with UNEP Teams in charge of PIMS 2061 and PIMS 2062 • Project Documents • Project reports • Review of deliverables
P13	What were, if any, the additional benefits and costs of the PIMS ID 2062 being closely related to the PIMS ID 2061?	• Evidence of consequences (positive or negative) of the structure of the two projects. • Relationship between 2061/2062 structure, costs and benefits.	• Interviews with UNEP Teams in charge of PIMS 2061 and PIMS 2062 • Budget reviews • Findings / Efficiency review
P13	What changes were made to adapt to the effects of COVID-19 and how might any changes affect the project's performance?	• Any evidence of mitigation measures identified and implemented. • Evidence of adequacy of mitigation measures.	• Interviews with UNEP Teams in charge of PIMS 2062 • Interviews with stakeholders • Interviews with implementing partners
P13	In what ways, and to what extent, have the needs and interests of differentiated groups been considered in the implementation and monitoring of the project?	• Any evidence of inclusive practices in project execution. • Any evidence of inclusive, gender or social benefits, even if not anticipated at design.	• Interviews with UNEP Teams in charge of PIMS 2062 • Interviews with stakeholders • Interviews with implementing partners • Project reports • Review of deliverables
P13	How could Water and Air Quality monitoring be linked with early warning and disaster risk management?	• Informed views from project stakeholders.	• Interviews with Project Team • Interviews with stakeholders • Interviews with implementing partners

ToR.	Evaluation questions	Indicators/criteria	Data sources
P13	How could similar interventions go beyond sectors of water and air (e.g. pollution and waste management)?	• Informed views from project stakeholders.	• Interviews with Project Team • Interviews with stakeholders • Interviews with implementing partners
P13	What opportunities could be considered to upscale for more capitals and countries in Africa?	• Informed views from project stakeholders	• Interviews with Project Team • Interviews with stakeholders • Interviews with implementing partners
Strategic relevance			
P13	Was the project alignment to Donor/Partner Strategic Priorities?	• The extent to which the activity is suited to the priorities and policies of the donors, implementing regions/countries and the target beneficiaries.	• Donor portfolios and programming • Interviews with relevant donors
P13	Was the project aligned to the UNEP Medium Term Strategy[23] (MTS), Programme of Work (POW) and Strategic Priorities?	• Project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval.	• UNEP's policies and strategies
P14	To which extent was the project in line with Global, Regional, Sub-regional and National Environmental Priorities?	• Synergies with national or regional initiatives.	• National and regional portfolios and programmes • Consultation with national and regional stakeholders 1.
P14	What was the complementarity with existing interventions?	• Complementarity with project A5. • Coordination and cooperation with other initiatives implemented by UNEP, other UN agencies, other agencies. • Coherence with external interventions.	• Identification of relevant interventions (through desktop research, interviews)
Quality of project design			
P14	How satisfactory was the project design? 2.	• Project Design Quality template.	• Project document • Project reports

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[23] *UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes. https://www.unenvironment.org/about-un-environment/evaluation-office/our-evaluation-approach/un-environment-documents*

ToR.	Evaluation questions	Indicators/criteria	Data sources
			• Interviews with project team including with authors of Project Document • Relevant Stakeholder consultations
Nature of external context			
P14	3. Where there any unforeseen developments that impacted the project success?	• Notably, related to the COVID19 pandemic and travel restrictions.	• Project reports • Interviews with project team including with authors of Project Document • Relevant Stakeholder consultations
Effectiveness			
P15	4. To which extent are the project outputs available?	• Project's success in producing the programmed outputs and making them available to the intended beneficiaries as well as its success in achieving milestones as per the project design document. • Quality, ownership by, and usefulness to, intended beneficiaries and the timeliness of the provision of outputs.	• Interviews with UNEP Teams in charge of PIMS 2062 • Interviews with stakeholders • Interviews with implementing partners • Project reports • Review of deliverables
P15	5. To which extent are the project outcomes achieved?	• The achievement of project outcomes is assessed as performance against the project outcomes as defined in the reconstructed Theory of Change. • Evidence of attribution between UNEP's intervention and the project outcomes.	• Interviews with UNEP Teams in charge of PIMS 2062 • Interviews with stakeholders • Interviews with implementing partners • Project reports • Review of deliverables
P15	6. What is the likelihood of achieving the project Impact?	• Based on the articulation of long-lasting effects in the reconstructed TOC *(i.e. from project outcomes, via intermediate states, to impact)*, the Evaluation will assess the likelihood of the intended, positive impacts becoming a reality. • Likelihood of the project to make a substantive contribution to the long-lasting changes represented by the Sustainable Development Goals, and/or the intermediate-level results reflected in UNEP's	• Interviews Project Team • Interviews with stakeholders, notably city representatives and national focal points • Interviews with implementing partners • Project reports 7.

ToR.	Evaluation questions	Indicators/criteria	Data sources
		Expected Accomplishments and the strategic priorities of funding partner(s). • Evidence of broader reach, interest, scaling and/or adoption e.g. discussions, forums and/or processes set in motion.	
P15	8. Did the project defined and implemented an adequate upscaling or replication methodology?	• The extent to which the project has played a <u>catalytic role or has promoted scaling up and/or replication</u> as part of its Theory of Change (including through Driver 3).	• Interviews with Project Team • Interviews with stakeholders, notably city representatives and national stakeholders
Financial Management			
P16	9. Did the project adhere to UNEP's financial policies and procedures?	• Verify the application of proper financial management standards and adherence to UNEP's financial management policies.	• Financial Team • Audits • Financial reports • PIMS
P16	10. To which extent the project ensured the completeness of financial information?	• Establish the actual spend across the life of the project of funds secured from all donors. • Report this expenditure, where possible, at output/component level and compare it with the approved budget. • Record where standard financial documentation is missing, inaccurate, incomplete or unavailable in a timely manner.	• Project Team • Financial Team • Audits • Financial reports • PIMS
P16	11. What was the quality of the communication between financial and project management staff?	• Assess the level of communication between the Project Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach.	• Project Team • Financial Team • PIMS
Efficiency			
P16	12. Was the implementation cost effective?	• The extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost.	• Detailed budget and financial reports
P16	13. Did the management team ensure the timeliness of project execution?	• planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. • The project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. • Any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe.	• Progress reports • National stakeholders • Implementing partners • Project extension documentation and justification • Budget implications
Monitoring and Reporting			

ToR.	Evaluation questions	Indicators/criteria	Data sources
P17	14. To which extent was the monitoring design and budgeting adequate to the project needs and ambitions? 15.	• Relevance and appropriateness of the project indicators as well as the methods used for tracking progress against them as part of conscious results-based management. • The quality of the design of the monitoring plan as well as the funds allocated for its implementation.	• M&E processes • Progress reports • Detailed budgets • Financial reports
P17	16. How well was project monitoring implemented?	• The monitoring system was operational and facilitated the timely tracking of results and progress towards projects objectives throughout the project implementation period. • Quality of the information generated by the monitoring system during project implementation. • How it was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. • Funds allocated for monitoring were used to support this activity.	• Project Team • M&E processes • Progress reports • Decisions influenced by M&E
P17	17. How well was project reporting done?	• Extent to which both UNEP and donor reporting commitments have been fulfilled, how was data collected.	• UNEP Teams • Progress reports • PIMS
	Sustainability		
P18	18. Are the benefits derived from the achievement of project outcomes likely to be maintained and developed after the close of the intervention?	• Identify and assess the key conditions or factors that are likely to undermine or contribute to the endurance of achieved project outcomes (i.e. 'assumptions' and 'drivers').	• Interviews with project team and country partners • Validated reformulated ToC
P18	*… from a socio-political perspective* 19.	• The extent to which social or political factors support the continuation and further development of the benefits derived from project outcomes. • Individual capacity development efforts are likely to be sustained.	• Interviews with project team and country partners (including NPs and national stakeholders) • Interviews with implementing partners
P18	*… from a financial perspective* 20.	• The extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained.	• Financial reports • Progress reports • Interviews with project team and country partners
P18	*-..from an institutional perspective* 21.	• The extent to which the sustainability of project outcomes (especially those relating to policies and laws) is dependent on issues relating to institutional frameworks and governance. • Institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. are robust enough to continue	• Interviews with project team and country partners (including NPs and national stakeholders) • Interviews with implementing partners • Progress reports • Synergies with other initiatives

ToR.	Evaluation questions	Indicators/criteria	Data sources
		delivering the benefits associated with the project outcomes after project closure. • Institutional capacity development efforts are likely to be sustained	
Factors Affecting Project Performance and Cross-Cutting Issues		
P18	22. How was the quality of project preparation and its overall level of readiness? 23.	• Appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilization. • Consider the nature and quality of engagement with stakeholder groups by the project team, the confirmation of partner capacity and development of partnership agreements as well as initial staffing and financing arrangements. • Evidence, during project design, of assessments of local situations, stakeholders, other initiatives, potential implementing partners, funding alternatives, technical alternatives.	• Project Document • Progress reports, inception report • Minutes of Meetings / Team meetings • Feedback from UNEP and from other donors during formulation
P18	24. How was the quality of project management and supervision?	• Assess the effectiveness of project management with regard to: providing leadership towards achieving the planned outcomes; managing team structures; maintaining productive partner relationships (including Steering Groups etc.); maintaining project relevance within changing external and strategic contexts; communication and collaboration with UNEP colleagues; risk management; use of problem-solving; project adaptation and overall project execution. • The performance of parties playing different roles should be discussed and a rating provided for both types of supervision (UNEP/Implementing Agency; Partner/Executing Agency) and the overall rating for this sub-category established as a simple average of the two.	• Project Document • Progress reports, inception report • Minutes of Meetings / Team meetings • Focal points • MoUs and other agreements with implementing partners • Feedback from direct stakeholders and implementing partners • Feedback from UNEP and from other donors
P19	25. How did the project ensure stakeholder participation and cooperation? 26.	• The quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. • The inclusion and participation of all differentiated groups, including vulnerable and gender groups.	• Feedback from direct stakeholders and implementing partners • Feedback from UNEP and from other donors
P19	27. How did the project ensure Human Rights and Gender Equality?	• To what extent the project has applied the UN Common Understanding on the human rights-based approach (HRBA) and the	• Project Document

ToR.	Evaluation questions	Indicators/criteria	Data sources
		UN Declaration on the Rights of Indigenous People. Within this human rights context the Evaluation will assess to what extent the intervention adheres to UNEP's Policy and Strategy for Gender Equality and the Environment. • To what extent project implementation and monitoring have taken into consideration: (i) possible inequalities (especially those related to gender) in access to, and the control over, natural resources; (ii) specific vulnerabilities of disadvantaged groups (especially women, youth and children and those living with disabilities) to environmental degradation or disasters; and (iii) the role of disadvantaged groups (especially those related to gender) in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.	• Logical framework and M&E practices related to Human Rights and gender Equality • Progress reports • Workshop and meeting reports 28.
P19	29. Did the project put in place adequate environmental and social safeguards? 30.	• Confirm whether UNEP requirements were met to: review risk ratings on a regular basis; monitor project implementation for possible safeguard issues; respond (where relevant) to safeguard issues through risk avoidance, minimization, mitigation or offsetting and report on the implementation of safeguard management measures taken.	• Project reports • M&E practices related to environmental practices
P19	31. How was country ownership and driven-ness promoted? 32.	• Quality and degree of engagement of government / public sector agencies in the project. • The engagement not only of those directly involved in project execution and those participating in technical or leadership groups, but also those official representatives whose cooperation is needed for change to be embedded in their institutions and offices.	• Progress reports • Key informant interviews with project partners 33.
P20	34. Were existing communication channels and networks used effectively, including meeting the differentiated needs of gendered or marginalised groups? Were any feedback channels established?	• Communication of learning and experience sharing between project partners and interested groups arising from the project during its life • Public awareness activities that were undertaken during the implementation of the project to influence attitudes or shape behaviour among wider communities and civil society at large. • Sustainability of the web-based platforms under their socio-political, institutional and/or financial perspectives.	• Progress reports • Key informant interviews with project partners • M&E practices related to communication

ANNEX IV. KEY DOCUMENTS CONSULTED

Project Documentation:

- Project A5 B: 716.2b Air and Water Quality Monitoring (2019)
- Project Document A5: "Foresight, Emerging issues and Strategy for the Environment – Implementing Pilot Air and Water Quality Monitoring Systems (2019)
- Final Project Progress Report on Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa (May 2022)
- Executive Brief - Summary Report for 2019-2021- Urban Air Quality Monitoring in African Cities: Addis Ababa, Cape Town and Nairobi (no date)
- Progress report: Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa focusing on three pilot cities in African Cities: Addis Ababa, Cape Town and Nairobi Progress Report (May 2020)
- Sustainable Water and Air Quality Monitoring and Assessment: Responses to the Evaluation report (September 2021)
- Framework Agreement on Strategic Cooperation between The Ministry of Environmental Protection of the People's republic of China and The United Nations Environment Program (no date)
- Amendment n°1 – Framework Agreement on Strategic Cooperation between Ministry of Ecology and Environment of the People's Republic of China and the United Nations Environment Program (December 2020)
- A5 B Budget Breakdown, revision 1, excel document, 2019
- Revised budget, Word document, not dated.
- A5 B Status of Allotment, excel document, 2023.

Deliverables

- Sustainable Water and Air Quality Monitoring Systems in Africa - Nairobi Pilot Project – Draft final report submitted by RCMRD to UNEP (2020)
- Sustainable Water and Air Quality Monitoring Systems in Africa - Addis Ababa – draft final report submitted by RCMRD to UNEP (June, 2021)
- Capacity development for the water resources, assessment, monitoring and management – Draft report by consultant Georges Krhoda to UNEP (no date)Institutional and infrastructural framework for water resources management status and requirements for capacity building in Nairobi city county - Final report by consultant Georges Krhoda to UNEP (no date)
- Six information Flyers on air Pollution and Water Pollution – Nairobi, Addis-Ababa, Cape Town, Grid Arendal for UNEP
- Grid Geneva – African Cities report (no date), 2 p.

ANNEX V. BRIEF CV OF THE EVALUATORS

Name	Geraldo CARREIRO
Profession	Consultant
Nationality	Portuguese
Country experience	• Europe: 7 countries • Africa: 24 countries • Americas: 7 countries • Asia: 10 countries
Education	• MSc Land and Water management

- Thematic expertise in sustainable development, climate change, natural resources management with a focus on land and water, energy, rural development.
- Monitoring, Evaluation: design of monitoring systems, result-oriented monitoring missions, conceptual and technical support to monitoring units, lessons learnt, project/programme/thematic evaluations and assessments including complex evaluations

Relevant assignments in the last 8 years

2022 2023	Spain, Belgium	Greening EU Cooperation Facility – Technical Assistance for the integration of environment, climate change, biodiversity and Disaster Risk Reduction in EU cooperation
2015 2023	Europe, Africa, Asia	Key Expert, Team Leader of the EU Global Climate Change Alliance Support Facility
2015 2021	Europe, Benin, Haiti, Bolivia, Ethiopia	Technical Assistance to the EU Mainstreaming of Environment, Climate Change and Biodiversity into development cooperation of the EU (HQ and EUD)
2020	Cameroon, Sierra Leone	Country Environmental Profiles and review of the Nationally Determined Contributions NDC of Cameroon and Sierra Leone, to inform and propose clear recommendations for the post-2020 programming process taking into account EU global commitments and the national policy dialogues of the EU Delegations
2019	Mexico	Support to evaluation, quality control and draft recommendations for the retrospective evaluation of AFD's public policy loans supporting the energy transition reform (ENERMEX I & II, €180m) and the Water sector policy (CONAGUA, €100m) in Mexico.
2016 2017	Brazil	Evaluator within the reviews of the AFD Budget Support operations: Integration and Urban Mobility programs of the Rio de Janeiro State Metropolitan Region (CBR1042) and of Support for Investments in Essential Services and Infrastructure in the State of Minas Gerais (CBR1046),
2015	Mozambique	Final evaluation of the UNDAF (United Nations Development Assistance Framework) country programme 2012-2015. Final review of the coordinated UN support, including all participating UN agencies (22 UN agencies in total), and their funding partners, in the fields of governance, social, and economic support to Mozambique, notably via civil society organisations

Name	Renaud HOURCADE
Profession	Senior Research Fellow - Public Policy Researcher & Analyst
Nationality	French
Country experience	• Europe: the UK, France • Africa: Senegal, Kenya •
Education	• M.A Politics, Phd Public Policy (Rennes, France)

Areas of expertise

Air Pollution | Urban Governance | Health and Environment Policies
- 15 years' experience in research on public policy processes at local, regional, national levels
- 15+ publications in peer reviewed academic journals, edited books, public reports.
- Principal Investigator in 3 recent research projects

Recent assignments as Principal Investigator

Globalsmog (2021-2025). « Tackling Air Pollution in the Global South Cities – A Comparative Analysis of Governance Challenges, Lessons and Prospects ».
A 4 year research project funded by the ANR (National Research Agency) involving 12 researchers of various backgrounds (geography, anthropology, public policy, public health). Globalsmog investigates the emergence and management of air pollution as a local policy issue in ten metropoles of the global south (Accra, Dakar, Casablanca, Cairo, Nairobi, Pune, Delhi, Hyderabad, Bangkok, Hanoi).

Dakdel (2020-2021). Air Pollution in Dakar and Delhi in a Comparative Perspective
A 'demonstrator' project aiming at building a comparison framework to better understand the appropriation of Air pollution as a health issue in the global south. 4 researchers involved. Funded by Université de Rennes.

Demoster (2019-2022). Energy Transition for all ?
An investigation into the social justice dimension of energy transition policies in Europe, seen through the lens of fuel poverty reduction initiatives. A comparison across three countries (Fr / UK / Spain) involving 4 researchers. Funded by the French Ministry for the Environment.

Publications (most recent and relevant)

Mir Alvarez Celia, Hourcade Renaud, Lefebvre Bertrand, Pilot Eva, "Air Quality Monitoring, Policy and Health Effects in West Africa: A Scoping Review of ECOWAS Cities", *International Journal of Environmental* Research *and Public Health,* 17 (23), 2020. https://doi.org/10.3390/ijerph17239151

Hourcade, Renaud, Joan Cortinas Muñoz, « Implementing water protection policies. Combining QCA and process tracing: Methodology and contributions », *Revue française de science politique*, 2021, Vol. 71 (3), p. 413-435. ⟨10.3917/rfsp.713.0413⟩

Hourcade Renaud, Bedrani Naila, Landré Alban, « Island agriculture challenged by landscape protection. Conflicting policy goals and local conciliation strategies », *Norois,* n°260, 2021, p. 53-66, https://doi-org.inshs.bib.cnrs.fr/10.4000/norois.10960

ANNEX VI. EVALUATION TORS (WITHOUT ANNEXES)

Terminal Evaluation of the UNEP PIMS ID 2062 project

"Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa (Pilot Project)"

Section 1: PROJECT BACKGROUND AND OVERVIEW

1.   Project General Information

Table 1. Project summary

UNEP PIMS ID:	2062	also called A5b	
Implementing Partners	UNEP Early Warning Assessment Division (formerly Science Division), UNEP Africa Regional Office		
Executing Partners	Center for Environment and Development for Arab Region and Europe (CEDARE)		
	Environment Pulse Institute (EPI)		
	Beijing Air Quality Monitoring Center		
	Chinese Academy of Sciences		
	UNEP GEMS/Water Capacity Development Centre at University College Cork, Ireland		
	National Environment Management Authority (NEMA), Kenya		
	Environment Protection Agency of Ethiopia		
	Department of Environmental Affairs, South Africa		
	City Authorities of Nairobi, Addis Ababa, and Cape Town		
Relevant SDG(s) and indicator(s):	*Goal 3. Ensure healthy lives and promote well-being for all at all ages*		
	Indicator 3.9.1 Mortality rate attributed to household and ambient air pollution.		
	Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all		
	• 7.1.2 Proportion of population with primary reliance on clean fuels and technology		
	Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all		
	• 8.4.1 Material footprint, material footprint per capita, and material footprint per GDP; 8.4.2 Domestic material consumption, domestic material consumption per capita, and domestic material consumption per GDP		
	Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation		
	• 9.4.1 CO2 emission per unit of value added;		
	• 9.5.1 Research and development expenditure as a proportion of GDP		
	Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable		
	• 11.5.1 Number of deaths, missing persons and directly affected persons attributed to disasters per 100,000 population;		

- 11.5.2 Direct economic loss attributed to disasters in relation to global gross domestic product (GDP);
- 11.6.1 Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities;
- 11.6.2 Annual mean levels of fine particulate matter (e.g. PM2.5 and PM10) in cities (population weighted);
- 11.b.1 Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015−2030
- 11.b.2 Proportion of local governments that adopt and implement local disaster risk reduction strategies in line with national disaster risk reduction strategies

Goal 12. Ensure sustainable consumption and production patterns

- 12.1.1 Number of countries developing, adopting or implementing policy instruments aimed at supporting the shift to sustainable consumption and production
- 12.2.1 Material footprint, material footprint per capita, and material footprint per GDP
- 12.4.2 (a) Hazardous waste generated per capita; and (b) proportion of hazardous waste treated, by type of treatment
- 12.5.1 National recycling rate, tons of material recycled
- 12.c.1 Amount of fossil-fuel subsidies (production and consumption) per unit of GDP

Goal 13. Take urgent action to combat climate change and its impacts

- 13.3.1 Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment

Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

- 17.7.1 Total amount of funding for developing countries to promote the development, transfer, dissemination and diffusion of environmentally sound technologies
- 17.9.1 Dollar value of financial and technical assistance (including through North-South, South-South and triangular cooperation) committed to developing countries
- 17.14.1 Number of countries with mechanisms in place to enhance policy coherence of sustainable development

17.16.1 Number of countries reporting progress in multi-stakeholder development effectiveness monitoring frameworks that support the achievement of the sustainable developments.

Sub-programme:	MTS 2018-2021: Environment Under Review MTS 2022-2025: Science-Policy	**Expected Accomplishment(s):**	**PoW 2018-2019 and PoW 2020-2021 – EA(a):** Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental

			assessments, identify emerging issues and foster policy action **PoW 2022-2023 − Outcome 3C**: Releases of pollutants to air, water, soil and the ocean are reduced.
UNEP approval date:	17 June 2019	**Programme of Work Output(s):**	**PoW 2018-2019 and PoW 2020-2021 − EA(a) Output 6:** National and regional reporting systems based on shared environmental information system principles generating open access to information **PoW 2022-2023 − Direct Outcome 3.13**: Sound science, data and statistics, analysis, information and knowledge are generated and shared.
Expected **start date:**	January 2019	**Actual start date:**	June 2019
Planned **operational completion date:**	December 2021	**Actual operational completion date:**	December 2021, as indicated on PIMS.
Planned **total project budget at approval:**	USD 1,942,425 Cash (Belt and Road Chinese fund): USD 1,000,000 In-kind: USD 942,425	**Actual total expenditures reported as of [31/12/2022]:**	China Trust Funds: USD 1,004,792.20 In Kind: USD 942,425
Planned **Environment Fund allocation:**	USD 0	**Actual Environment Fund expenditures reported as of [31/12/2022]:**	N/A
Planned **Extra-Budgetary Financing:**	USD 1,000,000	**Secured Extra-Budgetary Financing:**	USD 973,541
		Actual Extra-Budgetary Financing expenditures reported as of [30/04/2023]:	USD 1,004,792.20
First disbursement:	August 2019	**Planned date of financial closure:**	June 2023
No. of formal project revisions:	0	**Date of last approved project revision:**	N/A
No. of Steering Committee meetings:	2	**Date of last/next Steering Committee meeting:**	Last: 21/09/2022	Next: N/A

Mid-term Review/ Evaluation[24] *(planned date):*	December 2020	Mid-term Review/ Evaluation (actual date):	No Mid-Term Review/Evaluation
Terminal Evaluation *(planned date):*	December 2021	Terminal Evaluation (actual date):	May – December 2023
Coverage - Country(ies):	Ethiopia, Kenya and South Africa	Coverage - Region(s):	Africa
Dates of previous project phases:	N/A	Status of future project phases:	In proposal phase

2.   Clarification of the Evaluand

The project PIMS ID 2062 (also called **A5b**) was presented to the Evaluation Office as reaching operational completing and was therefore selected for a Terminal Evaluation. However, there is a close relationship, and some overlap, between this project and the PIMS ID 2061 "Foresight, emerging issues and strategy for the environment - Implementing Pilot Air and Water Quality Monitoring Systems" (also called **A5**). The implementation periods of both projects overlap, with PIMS ID 2062 running from June 2019 to December 2021 and PIMS ID 2061 running from June 2019 to August 2022.

From a results perspective, PIMS ID 2062 is a sub-project under PIMS ID 2061. PIMS ID 2062 can be considered as a component of PIMS ID 2061. PIMS ID 2062's outcome is one of the four outcomes of PIMS ID 2061. PIMS ID 2062's outputs are also found in PIMS ID 2061's logical framework.

The two projects do not share the same objectives, but their objectives are related. PIMS 2061's rationale is wider in its communication reach. The PIMS ID 2062 contributed to the UNEP's World Environment Situation Room (WESR) and Foresight Briefs. Whereas the PIMS ID 2061 contributed to Foresight briefs.

The dedicated China Trust Fund financing of PIMS 2062 is also included in the PIMS 2061 budget.

Initially, the two projects had the same Project Manager in the Africa Regional Office, and the same FMO in the Science Division. Later on, the PIMS ID 2061 was transferred to another Project Manager in the Early Warning Assessment Division (formerly known as Science Division). Other management arrangements seem similar.

The lessons learnt from PIMS 2061 were expected to inform the implementation of its sub-project PIMS 2062.

While PIMS 2062 intended to share best practices in other African cities, the intentions of PIMS 2061 were wider and were potentially targeting other regions, such as Asia and Latin America and the Caribbean.

Exchanges with the Project Manager and the FMO indicate that PIMS 2061 has not been evaluated. PIMS 2061 has no evaluation budget.

The scope of this evaluation will be the PIMS ID 2062. The evaluand is defined by the following parameters:

- Timeframe: June 2019 – December 2021
- Funding Envelope: China Trust Funds (USD 1,004,792.20) and In Kind (USD 942,425)
- Geographical Scope: Ethiopia, Kenya and South Africa
- Results Framework: Results of the PIMS ID 2062 (1 outcome and 3 outputs)

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[24] *UNEP policies require projects with planned implementation periods of 4 or more years to have a mid-point assessment of performance. For projects under 4 years, this should be marked as N/A.*

3.   Project Rationale

A. *For PIMS ID 2062*

Sub Saharan Africa (SSA) is home to some of the largest unplanned urban areas, characterized by abject urban poverty, limited urban infrastructural setup and institutional capacities and governance structures that are unable to adequately manage their sprawling population's basic needs. The spread of these informal settlements and growth of poorly planned secondary towns and cities has led to significant environmental impacts on human development, health and wellbeing. The air quality in the cities do not meet World Health Organization (WHO) guideline for ambient air quality and access to adequate and safe water. High exposure levels for water and air pollution are regarded to lead to significant health impacts.

Water (quantity and quality) and air pollution monitoring in most parts of Africa is infrequent, haphazard, often short term or project dependent. Institutional capacities for long term early warning and monitoring and regular assessments of water supplies and their quality and indoor and ambient air quality is important for the development of evidence-based policies and implementation of legislation to support integrated management in the cities. This is the core problem that has resulted in few countries in SSA having adequate institutional capacity and human and technical resources to address these challenges. Little attention has been paid to these problems and consequently limited financial resources allocated to address them as the core problem is least studied and monitored.

The institutions assessing and monitoring air and water quality for management are often deficient of a multi-sectorial integrated approach. For example, in most of the countries the meteorological department collects climate related air quality data, while other ministries also collect similar data for their own use in sectoral planning, for instance ministry of Agriculture. There is often poor inter-ministerial communication and sharing of information. This leads to duplication of efforts in collecting and analyzing similar data, resulting in wastage of resources.

The three target countries of the selected cities have geographical diversity and regional differences including climatic conditions, income levels, demography and institutional framework for air and water quality management. They also have comparability in air and water quality management governance. They all have elements of devolved functions whereby municipalities and cities may formulate and implement air and water quality legislation. Thus, the selected cities (Addis Ababa, Nairobi and Cape Town) have different levels of devolved functions for the municipalities and may display a diverse range of capacities at present in the development and implementation of their water and air quality management systems. This offers opportunities for peer learning though shared experience between a low to medium capacity city and possibilities of **upscaling best practices to other African cities.**

B. *For PIMS ID 2061*

It is UNEP's responsibility to create and sustain public concern about the state of the environment and to alert the world on which developmental issues have emerged on the global environmental scene to facilitate timely and actionable policy responses to address the issues.

The identification and communication of emerging issues to policy makers and the public is a process at the heart of UNEP Early Warning Assessment Division (formerly known as Science Division). Global, regional and national policy-making is facilitated by environmental information made available through foresight and strategic methods as well as by the systematic review and evidence-based analyses of emerging issues to inform decision (e.g. in Water and Air monitoring).

UNEP publishes Foresight Briefs to, among other things, highlight a hotspot of environmental change, feature an emerging science topic, or discuss a contemporary environmental issue. The public are thus provided with the opportunity to find out what is happening to their changing environment and the consequences of everyday choices, and to think about future directions for policy.

An example of such emerging issues relates to Air and Water Quality Monitoring Systems to support decision making, policy and action. Global Monitoring Systems can provide sound data on water and air quality to support scientific assessments and decision-making on the subjects. From lakes and

streams to coastal waters and estuaries, water quality monitoring is a critical practice carried out in countries across the globe. The major goal of air quality monitoring is to collect data that can be utilized to make informed choices to best oversee and improve the environment.

Water (quantity and quality) and air pollution monitoring in most parts of Africa is infrequent, haphazard, often short term or project dependent. Institutional capacities for long term early warning and monitoring and regular assessments of water supplies and their quality and indoor and ambient air quality is important for the development of evidence-based policies and implementation of legislation to support integrated management in the cities.

The institutions assessing and monitoring air and water quality for management are often deficient of a multi-sectorial integrated approach. A similar deficiency existed in the Asian and Latin American regions but these two have registered in strengthening the institutional capacities in this respect. **UNEP implemented a project on Air quality assessments for health and environment policies in Africa and Asia-Pacific to provide opportunities for sharing experiences and peer learning between the two regions, starting with the African region in three pilot cities.** The lessons learnt from this project will inform the implementation of sub-project A5b under this project.

The three target countries in Africa of the selected cities have geographical diversity and regional differences including climatic conditions, income levels, demography and institutional framework for air and water quality management. They also have comparability in air and water quality management governance. They all have elements of devolved functions whereby municipalities and cities may formulate and implement air and water quality legislation. Thus, the selected cities have different levels of devolved functions for the municipalities and may display a diverse range of capacities at present in the development and implementation of their water and air quality management systems. This offers opportunities for peer learning through shared experience between a low to medium capacity city and possibilities of **upscaling best practices to other African cities, as well as potentially other regions, such as Asia and Latin America and the Caribbean**.

4. Project Results Framework

The table below presents the Results Frameworks of the two projects (ID 2062 and 2061). Some inconsistencies were found in their respective project documents (ProDoc) and are illustrated in the table.

Formulation in original project document(s)	PIMS ID 2062 (A5b)		PIMS ID 2061 (A5)		
OBJECTIVES	Enhanced productivity, improved human livelihoods and better public health based on credible science and data from improved air and water quality monitoring and management included in policies of countries in three select pilot cities in Africa (Nairobi in Kenya, Addis in Ethiopia, Cape Town in South Africa).		Governments and other stakeholders use quality open environmental data, analyses and participatory processes that strengthen the science-policy interface to generate evidence-based environmental assessments, identify through Foresight analysis, emerging issues and foster policy action.		
	Theory of Change Section of the ProDoc	**Logical Framework Section of the ProDoc**	**Theory of Change Section of the ProDoc**		**Logical Framework Section of the ProDoc**
			Diagram	**Narrative**	
PROJECT OUTCOMES	1. *Strengthened capacity of three pilot cities (Addis Ababa, Nairobi and Cape Town) for air and water quality monitoring and compliance of standards increased due to availability of qualitative and timely information*	1. *Increased capacity for monitoring, compliance and enforcement of standards for air and water quality due to availability of qualitative and timely information in these cities (Addis Ababa, Nairobi and Cape Town)*	1. *Increased access to timely and uptodate information for reporting on environmentally related SDGs*	1. *Strengthened capacity of countries for making evidence-based decisions due to increased awareness on the state of the environments at the regional, sub-regional and national level because of the use and management of quality environmental information*	1. *Increased access to timely and uptodate information for reporting on environmentally related SDGs*
			2. *A5b outcome: Increased capacity for monitoring, compliance and enforcement of standards for air and water quality due to availability of qualitative and timely information in these cities (Addis Ababa, Nairobi and Cape Town)*	2. *Increased public awareness of foresight and strategy studies in UNEP priority areas*	2. *Increased capacity for monitoring, compliance and enforcement of standards for air and water quality due to availability of qualitative and timely information in three cities (Addis Ababa, Nairobi and Cape Town)*

			3.1. *A5 outcome 1: UNEP's assessment and decision-making processes strengthened through credible data flows available from countries and organizations to help keep the environment under review*	3. *Increased access to timely and uptodate information for reporting on environmentally related SDGs*	3. *UNEP's assessment and decision-making processes strengthened through credible data flows available from countries and organizations to help keep the environment under review*
			3.2 *A5 outcome 2: Increased public awareness foresight and strategy studies*		4. *Increased public awareness of foresight and strategy studies in UNEP priority areas*
			4. *Increased public awareness of foresight and strategy studies in UNEP priority areas*		
OUTPUTS	1.1 *A. Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals*	1.A. *Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals*	1.1. *A5 output A1: Backbone infrastructure developed*	1.1. *Output 1: An online knowledge and reporting platform providing access to data and information for various sources to keep the environment under review*	1.1. *A. An online knowledge and reporting platform providing access to data and information for various sources to keep the environment under review*
	1.2. *B. Institutional and technical support in urban air quality monitoring and water management provided for data gathering and storage in three pilot cities for policy action; compatible with UNEP Situation Room*	1.2. *B. Institutional and technical support in urban air quality monitoring and water management provided to cities*	1.2. *A5 output A2: An information exchange infrastructure with cross-browser and cross-device functionality*	2.1. *Output 2: Support provided for the establishment of national network including public platforms on urban water and air quality monitoring, reporting for compliance enforcement*	2.1. *A. Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals*
	1.3. *C. Establishment/strengthening of national networking on urban water and air quality monitoring and reporting*	1.3. *C. Support provided for the establishment of national network including public platforms on urban water and air quality monitoring, reporting*	2.1. *A5b Output A: Needs and assessment is made available for the three target cities to support improvements in water and air quality data collection and sharing for urban planning and reporting on sustainable development goals*	3.1. *Output 3: A dynamic list of environmental issues that UNEP is conducting foresight and strategy exercises on*	2.2. *B. Institutional and technical support in urban air quality monitoring and water management provided to cities*

			2.2. A5b Output B: Institutional and technical support in urban air quality monitoring and water management provided to cities	4.1. Output 4: A global network of stakeholders	2.3. C. Support provided for the establishment of national network including public platforms on urban water and air quality monitoring, reporting
			2.3. A5b Output C: Support provided for the establishment of national network including public platforms on urban water and air quality monitoring, reporting for compliance enforcement		3.1. B1: A dynamic list of foresight issues that UNEP is conducting foresight and strategy exercised on.
			3.1. A5 output B1: A dynamic list of foresight issues that UNEP is conducting foresight and strategy exercised on.		3.2. B2. Environmental foresight, modelling, simulation, horizon-scanning and scenarios-building constructed and directly contributes to open access to environmental data and information at global, regional, and national levels.
			3.2. B2: Environmental foresight, modelling, simulation, horizon-scanning and scenarios-building constructed and directly contributes to open access to environmental data and information at global, regional, and national levels.		3.3. B3. Trained national staff
			3.3. B3: Trained national staff		4.1. A. A global network of stakeholders
			4.1. A5 output C1: A global network of stakeholders		
			4.2. C2: List of emerging issues at regional and global levels		
			4.3. C3: Annual Frontiers report published		

5.   Executing Arrangements

A. For PIMS ID 2062

The roles and responsibilities of each project organizational/functional group are described below:

Project Manager: The project manager in the Regional office for Africa provided the overall coordination of the project, and facilitated the sharing of experiences and lessons learned among the participating countries. Furthermore, the project manager oversaw progress reporting and liaised with the Fund Management Officer on financial issues and reporting.

Fund Management Officer: was to monitor and certify expenditures; advise Project Manager on administrative issues; alert Project Manager of financial risks anticipated or faced; initiate annual budget revision and regular budget revisions to reconcile expenditures and assist any budgetary issues in project revisions; review expenditure reports of implementing partners, and facilitate cash transfers if reports are satisfactory.

Project Team Members: were to plan, monitor and manage specific outputs; take responsibility on monitoring progress and use of resources; identify and advise Project Manager of any issues and risks associated with responsible work area; propose corrective action or revision within project boundaries, if necessary; prepare work plan, report on progress and field missions; carry out oversight of partners' performance; and consolidate inputs for progress reporting.

Supervisor: was to guide Project Managers on project feasibility and provide timely and adequate feedback; advise Project Managers on coordination with other relevant UN Environment projects; ensure effectiveness and efficiency in project delivery; resolve conflicts and approve any changes within the authorities; identify and deal with implementation problems on both administrative and technical/substantive issues, including political judgments.

Sub-programme Coordinator: was to ensure coherence, coordination in monitoring and reporting of projects within Sub-programme, and highlight relevant issues to the responsible supervisor; assess project's contribution towards overall delivery and achievement of PoW outputs and Expected Accomplishments.

Project Steering Committee: the existing regular Science Division-Regional Teams call (weekly or biweekly) were to include dedicated sessions to discuss the progress of this project, with expended membership as necessary. These meeting were to serve as the project steering committee.

B. For PIMS ID 2061

The roles and responsibilities of each project organizational/functional group are described below:

Project Manager: The Project Manager (PM) was based in the Science Division. The PM was to be assisted by a project manager from the Regional Office for Africa who would provide the overall coordination of the project and facilitate the sharing of experiences and lessons learned among the participating stakeholders. Furthermore, the PM oversaw progress reporting and liaise with the Fund Management Officer an financial issues and reporting.

Fund Management officer (Science Division): was to monitor and certify expenditures; advise Project Manager on administrative issues; alert Project Manager of financial risks anticipated or faced; initiate annual budget revision and regular budget revisions to reconcile expenditures and assist any budgetary issues in project revisions; review expenditure reports of implementing partners and facilitate cash transfers if reports are satisfactory.

Project Team Members: were to plan, monitor and manage specific outputs; take responsibility on monitoring progress and use of resources; identify and advise Project Manager of any issues and risks associated with responsible work area; propose corrective action or revision

within project boundaries, if necessary; prepare work plan, report on progress and field missions; carry out oversight of partners' performance; and consolidate inputs for progress reporting.

Supervisor (Chief, COTI, Science Division): was to guide project manager on project feasibility and provide timely and adequate feedback; advise project manager on coordination with other relevant UNEP projects; ensure effectiveness and efficiency in project delivery; resolve conflicts and approve any changes within his/her authority; identify and deal with implementation problems on both administrative and technical/substantive issues, including political judgments.

Sub-programme Coordinator: was to ensure coherence, coordination in monitoring and reporting of projects within the sub-programme and highlight relevant issues to the project manager; assess project's contribution towards overall delivery and achievement of PoW outputs and expected accomplishments.

Partners: were to contribute as required in the identification, analysis and publication of emerging environmental issues.

6.   Project Cost and Financing

The table below presents the budget at design of the two projects. The FMO confirmed that the budget of the PIMS ID 2062 was fully included under the PIMS ID 2061.

		PIMS ID 2062 (A5b)	PIMS ID 2061 (A5)
Cash	Secured XB funding "Belt and Road Chinese fund" PSC XB Funds 13% (USD 115,044)	USD 1,000,000	USD 1,000,000
	Unsecured Environment Funds	USD 0	USD 400,000
	Unsecured Norway Funds (8% PSC)	USD 0	USD 200,000
	TOTAL XB Funding	USD 1,000,000	USD 1,600,000
In-kind	Environment Fund staff costs	USD 414,288	USD 2,061984
	Regular budget staff costs	USD 377,488	USD 699,469
	Overhead Trust fund staff costs	USD 65,119	USD 63,703
	Other staff costs (XB)	USD 85,831	USD 205,734
	Other In-kind Funding (from GRID Partners)	USD 0	USD 575,000
	TOTAL In-kind Budget	USD 942,425	USD 3,605,891
TOTAL		USD 1,942,425	USD 5,205,891

7.   Implementation Issues

The PIMS ID 2062 was expected to end in Dec. 2021, as indicated in the approved ProDoc (2019). However, due to the delays in project implementation caused by the COVID-19 pandemic, the Project Manager informed the Evaluation Office of UNEP that the project was extended by one year till Dec. 2022. However, the project did not have any formal revision. The project end date indicated on PIMS is 31 December 2021.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

8.   Objective of the Evaluation

In line with the UNEP Evaluation Policy[25] and the UNEP Programme Manual[26], the Terminal Evaluation is undertaken at operational completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The Evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and the main project partners including the National Environment Management Authority (NEMA), Kenya, the Environment Protection Agency of Ethiopia, the Department of Environmental Affairs, South Africa, and the City Authorities of Nairobi, Addis Ababa, and Cape Town. Therefore, the Evaluation will identify lessons of operational relevance for future project formulation and implementation, especially where a second phase of the project is being considered. Recommendations relevant to the whole house may also be identified during the evaluation process.

9.   Key Evaluation Principles

Evaluation findings and judgements will be based on **sound evidence and analysis**, clearly documented in the Evaluation Report. Information will be triangulated (i.e. verified from different sources) as far as possible, and when verification is not possible, the single source will be mentioned (whilst anonymity is still protected). Analysis leading to evaluative judgements should always be clearly spelled out.

The "Why?" Question. As this is a Terminal Evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention will be given to learning from the experience. Therefore, the "*why?*" question should be at the front of the consultants' minds all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultants need to go beyond the assessment of "*what*" the project performance was and make a serious effort to provide a deeper understanding of "*why*" the performance was as it was (i.e. what contributed to the achievement of the project's results). This should provide the basis for the lessons that can be drawn from the project.

Attribution, Contribution and Credible Association: In order to *attribute* any outcomes and impacts to a project intervention, one needs to consider the difference between what has happened with, and what would have happened without, the project (i.e. take account of changes <u>over time</u> and <u>between contexts</u> in order to isolate the effects of an intervention). This requires appropriate baseline data and the identification of a relevant counterfactual, both of which are frequently not available for evaluations. Establishing the *contribution* made by a project in a complex change process relies heavily on <u>prior intentionality</u> (e.g. approved project

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design documentation, logical framework) and the articulation of <u>causality</u> (e.g. narrative and/or illustration of the Theory of Change). Robust evidence that a project was delivered as designed and that the expected causal pathways developed supports claims of contribution and this is strengthened where an alternative theory of change can be excluded. A *credible association* between the implementation of a project and observed positive effects can be made where a strong causal narrative, although not explicitly articulated, can be inferred by the chronological sequence of events, active involvement of key actors and engagement in critical processes.

Communicating evaluation results. A key aim of the Evaluation is to encourage reflection and learning by UNEP staff and key project stakeholders. The consultants should consider how reflection and learning can be promoted, both through the evaluation process and in the communication of evaluation findings and key lessons. Clear and concise writing is required on all evaluation deliverables. Draft and final versions of the Main Evaluation Report will be shared with key stakeholders by the Evaluation Manager. There may, however, be several intended audiences, each with different interests and needs regarding the report. The consultants will plan with the Evaluation Manager which audiences to target and the easiest and clearest way to communicate the key evaluation findings and lessons to them. This may include some, or all, of the following; a webinar, conference calls with relevant stakeholders, the preparation of an Evaluation Brief or interactive presentation.

10.   Key Strategic Questions

In addition to the evaluation criteria outlined in Section 10 below, the Evaluation will address the **strategic questions** listed below. These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution:

a) Why were two distinct projects (ID 2062 and ID 2061) designed? What were the advantages of designing two distinct projects? Did the foreseen advantages materialize during the project implementations? What lessons can be learned about the particular interlinked designs of these projects?

b) What were, if any, the additional benefits and costs of the PIMS ID 2062 being closely related to the PIMS ID 2061?

c) What changes were made to adapt to the effects of COVID-19 and how might any changes affect the project's performance?

d) In what ways, and to what extent, have the needs and interests of differentiated groups been considered in the implementation and monitoring of the project?

11.   Evaluation Criteria

All evaluation criteria will be rated on a six-point scale. Sections A-I below, outline the scope of the criteria. A weightings table in excel format will be provided by the Evaluation Manager to support the determination of an overall project rating. The set of evaluation criteria are grouped in nine categories: (A) Strategic Relevance; (B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, which comprises assessments of the availability of outputs, achievement of outcomes and likelihood of impact; (E) Financial Management; (F) Efficiency; (G) Monitoring and Reporting; (H) Sustainability; and (I) Factors Affecting Project Performance. The Evaluation Consultants can propose other evaluation criteria as deemed appropriate.

C. *Strategic Relevance*

The Evaluation will assess the extent to which the activity is suited to the priorities and policies of the donors, implementing regions/countries and the target beneficiaries. The Evaluation will include an assessment of the project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. Under strategic relevance an assessment of the complementarity of the project with other interventions

addressing the needs of the same target groups will be made. This criterion comprises four elements:

i.   ***Alignment to the UNEP Medium Term Strategy[27] (MTS), Programme of Work (POW) and Strategic Priorities***

The Evaluation should assess the project's alignment with the MTS and POW under which the project was approved and include, in its narrative, reflections on the scale and scope of any contributions made to the planned results reflected in the relevant MTS and POW. UNEP strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building[28] (BSP) and South-South Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-SC is regarded as the exchange of resources, technology and knowledge between developing countries.

ii.   ***Alignment to Donor/Partner Strategic Priorities***

Donor strategic priorities will vary across interventions. The Evaluation will assess the extent to which the project is suited to, or responding to, donor priorities. In some cases, alignment with donor priorities may be a fundamental part of project design and grant approval processes while in others, for example, instances of 'softly-earmarked' funding, such alignment may be more of an assumption that should be assessed.

iii.   ***Relevance to Global, Regional, Sub-regional and National Environmental Priorities***

The Evaluation will assess the alignment of the project with global priorities such as the SDGs and Agenda 2030. The extent to which the intervention is suited, or responding to, the stated environmental concerns and needs of the countries, sub-regions or regions where it is being implemented will be considered. Examples may include: UN Development Assistance Frameworks (UNDAF) or national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc. Within this section consideration will be given to whether the needs of all beneficiary groups are being met and reflects the current policy priority to leave no one behind.

iv.   ***Complementarity with Relevant Existing Interventions/Coherence[29]***

An assessment will be made of how well the project, either at design stage or during the project inception or mobilization[30], took account of ongoing and planned initiatives (under the same sub-programme, other UNEP sub-programmes, or being implemented by other agencies within the same country, sector or institution) that address similar needs of the same target groups. The Evaluation will consider if the project team, in collaboration with Regional Offices and Sub-Programme Coordinators, made efforts to ensure their own intervention was complementary to other interventions, optimized any synergies and avoided duplication of effort. Examples may include UNDAFs or One UN programming. Linkages with other interventions should be described and instances where UNEP's comparative advantage has been particularly well applied should be highlighted.

Factors affecting this criterion may include:
- Stakeholders' participation and cooperation
- Responsiveness to human rights and gender equality
- Country ownership and driven-ness

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[27] *UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes. https://www.unenvironment.org/about-un-environment/evaluation-office/our-evaluation-approach/un-environment-documents*

[28] *http://www.unep.fr/ozonaction/about/bsp.htm*

[29] *This sub-category is consistent with the new criterion of 'Coherence' introduced by the OECD-DAC in 2019.*

[30] * A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.*

D. *Quality of Project Design*

The quality of project design is assessed using an agreed template during the evaluation inception phase, ratings are attributed to identified criteria and an overall Project Design Quality rating is established. The complete Project Design Quality template should be annexed in the Evaluation Inception Report. Later, the overall Project Design Quality rating[31] should be entered in the final evaluation ratings table (as item B) in the Main Evaluation Report and a summary of the project's strengths and weaknesses at design stage should be included within the body of the report.

Factors affecting this criterion may include (at the design stage):
- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equality

E. *Nature of External Context*

At evaluation inception stage a rating is established for the project's external operating context (considering the prevalence of conflict, natural disasters and political upheaval[32]). This rating is entered in the final evaluation ratings table as item C. Where a project has been rated as facing either an Unfavourable or Highly Unfavourable external operating context, and/or a negative external event has occurred during project implementation, the ratings for Effectiveness, Efficiency and/or Sustainability may be increased at the discretion of the Evaluation Consultants and Evaluation Manager together. A justification for such an increase must be given.

F. *Effectiveness*

i. *Availability of Outputs[33]*

The Evaluation will assess the project's success in producing the programmed outputs and making them available to the intended beneficiaries as well as its success in achieving milestones as per the project design document (ProDoc). <u>Any *formal* modifications/revisions made during project implementation will be considered part of the project design.</u> Where the project outputs are inappropriately or inaccurately stated in the ProDoc, reformulations may be necessary in the reconstruction of the Theory of Change (TOC). In such cases a table should be provided showing the original and the reformulation of the outputs for transparency. The availability of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their ownership by, and usefulness to, intended beneficiaries and the timeliness of their provision. It is noted that emphasis is placed on the performance of those outputs that are most important to achieve outcomes. The Evaluation will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.

Factors affecting this criterion may include:
- Preparation and readiness
- Quality of project management and supervision[34]

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[31] *In some instances, based on data collected during the evaluation process, the assessment of the project's design quality may change from Inception Report to Main Evaluation Report.*

[32] *Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management by the project team. From March 2020 this should include the effects of COVID-19.*

[33] *Outputs are the availability (for intended beneficiaries/users) of new products and services and/or gains in knowledge, abilities and awareness of individuals or within institutions (UNEP, 2019)*

[34] *'Project management and supervision' refers to the supervision and guidance provided by UNEP to implementing partners and national governments.*

ii.   Achievement of Project Outcomes[35]

The achievement of project outcomes is assessed as performance against the project outcomes as defined in the reconstructed[36] Theory of Change. These are outcomes that are intended to be achieved by the end of the project timeframe and within the project's resource envelope. Emphasis is placed on the achievement of project outcomes that are most important for attaining intermediate states. As with outputs, a table can be used where substantive amendments to the formulation of project outcomes is necessary to allow for an assessment of performance. The Evaluation should report evidence of attribution between UNEP's intervention and the project outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UNEP's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the project outcomes realised.

Factors affecting this criterion may include:
- Quality of project management and supervision
- Stakeholders' participation and cooperation
- Responsiveness to human rights and gender equality
- Communication and public awareness

iii.   Likelihood of Impact

Based on the articulation of long-lasting effects in the reconstructed TOC *(i.e. from project outcomes, via intermediate states, to impact),* the Evaluation will assess the likelihood of the intended, positive impacts becoming a reality. Project objectives or goals should be incorporated in the TOC, possibly as intermediate states or long-lasting impacts. The Evaluation Office's approach to the use of TOC in project evaluations is outlined in a guidance note available and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from project outcomes to impacts, taking account of whether the assumptions and drivers identified in the reconstructed TOC held. Any unintended positive effects should also be identified and their causal linkages to the intended impact described.

The Evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects (e.g. will vulnerable groups such as those living with disabilities and/or women and children, be disproportionally affected by the project?). Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental and Social Safeguards.

1.   The Evaluation will consider the extent to which the project has played a catalytic role[37] or has promoted scaling up and/or replication as part of its Theory of Change (either explicitly as in a project with a demonstration component or implicitly as expressed in the drivers required to move to outcome levels) and as factors that are likely to contribute to greater or long-lasting impact.

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[35] *Outcomes are the use (i.e. uptake, adoption, application) of an output by intended beneficiaries, observed as changes in institutions or behavior, attitude or condition (UNEP, 2019)*

[36] *All submitted UNEP project documents are required to present a Theory of Change. The level of 'reconstruction' needed during an evaluation will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any formal changes made to the project design.*

[37] *The terms catalytic effect, scaling up and replication are inter-related and generally refer to extending the coverage or magnitude of the effects of a project. Catalytic effect is associated with triggering additional actions that are not directly funded by the project – these effects can be both concrete or less tangible, can be intentionally caused by the project or implied in the design and reflected in the TOC drivers, or can be unintentional and can rely on funding from another source or have no financial requirements. Scaling up and Replication require more intentionality for projects, or individual components and approaches, to be reproduced in other similar contexts. Scaling up suggests a substantive increase in the number of new beneficiaries reached/involved and may require adapted delivery mechanisms while Replication suggests the repetition of an approach or component at a similar scale but among different beneficiaries. Even with highly technical work, where scaling up or replication involves working with a new community, some consideration of the new context should take place and adjustments made as necessary.*

Ultimately UNEP and all its partners aim to bring about benefits to the environment and human well-being. Few projects are likely to have impact statements that reflect such long-lasting or broad-based changes. However, the Evaluation will assess the likelihood of the project to make a substantive contribution to the long-lasting changes represented by the Sustainable Development Goals, and/or the intermediate-level results reflected in UNEP's Expected Accomplishments and the strategic priorities of funding partner(s).

Factors affecting this criterion may include:
• Quality of Project Management and Supervision (including adaptive management)
• Stakeholders participation and cooperation
• Responsiveness to human rights and gender equality
• Country ownership and driven-ness
• Communication and public awareness

G. *Financial Management*

Financial management will be assessed under three themes: *adherence* to UNEP's financial policies and procedures, *completeness* of financial information and *communication* between financial and project management staff. The Evaluation will establish the actual spend across the life of the project of funds secured from all donors. This expenditure will be reported, where possible, at output/component level and will be compared with the approved budget. The Evaluation will verify the application of proper financial management standards and adherence to UNEP's financial management policies. Any financial management issues that have affected the timely delivery of the project or the quality of its performance will be highlighted. The Evaluation will record where standard financial documentation is missing, inaccurate, incomplete or unavailable in a timely manner. The Evaluation will assess the level of communication between the Project Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach.

Factors affecting this criterion may include:
• Preparation and readiness
• Quality of project management and supervision

H. *Efficiency*

Under the efficiency criterion, the Evaluation will assess the extent to which the project delivered maximum results from the given resources. This will include an assessment of the cost-effectiveness and timeliness of project execution.

Focussing on the translation of inputs into outputs, *cost-effectiveness* is the extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost. *Timeliness* refers to whether planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. The Evaluation will also assess to what extent any project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. The Evaluation will describe any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe and consider whether the project was implemented in the most efficient way compared to alternative interventions or approaches.

The Evaluation will give special attention to efforts made by the project teams during project implementation to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities[38] with other initiatives, programmes and projects etc. to increase project efficiency.

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[38] *Complementarity with other interventions during project design, inception or mobilization is considered under Strategic Relevance above.*

The factors underpinning the need for any project extensions will also be explored and discussed. As management or project support costs cannot be increased in cases of 'no cost extensions', such extensions represent an increase in unstated costs to implementing parties.

Factors affecting this criterion may include:
- Preparation and readiness (e.g. timeliness)
- Quality of project management and supervision
- Stakeholders participation and cooperation

I. Monitoring and Reporting

The Evaluation will assess monitoring and reporting across three sub-categories: monitoring design and budgeting, monitoring implementation and project reporting.

i. Monitoring Design and Budgeting

Each project should be supported by a sound monitoring plan that is designed to track progress against SMART[39] results towards the provision of the project's outputs and achievement of project outcomes, including at a level disaggregated by gender, marginalisation or vulnerability, including those living with disabilities. In particular, the Evaluation will assess the relevance and appropriateness of the project indicators as well as the methods used for tracking progress against them as part of conscious results-based management. The Evaluation will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for Mid-Term and Terminal Evaluation/Review should be discussed if applicable.

ii. Monitoring of Project Implementation

The Evaluation will assess whether the monitoring system was operational and facilitated the timely tracking of results and progress towards projects objectives throughout the project implementation period. This assessment will include consideration of whether the project gathered relevant and good quality baseline data that is accurately and appropriately documented. This should include monitoring the representation and participation of disaggregated groups, including gendered, marginalised or vulnerable groups, such as those living with disabilities, in project activities. It will also consider the quality of the information generated by the monitoring system during project implementation and how it was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. The Evaluation should confirm that funds allocated for monitoring were used to support this activity.

iii. Project Reporting

UNEP has a centralised Project Information Management System (PIMS) in which project managers upload six-monthly progress reports against agreed project milestones. This information will be provided to the Evaluation Consultants by the Evaluation Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team. The Evaluation will assess the extent to which both UNEP and donor reporting commitments have been fulfilled. Consideration will be given as to whether reporting has been carried out with respect to the effects of the initiative on disaggregated groups.

Factors affecting this criterion may include:
- Quality of project management and supervision
- Responsiveness to human rights and gender equality (e.g disaggregated indicators and data)

J. Sustainability

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[39] *SMART refers to results that are specific, measurable, achievable, relevant and time-oriented. Indicators help to make results measurable.*

Sustainability[40] is understood as the probability of the benefits derived from the achievement of project outcomes being maintained and developed after the close of the intervention. The Evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the endurance of achieved project outcomes (i.e. 'assumptions' and 'drivers'). Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances or conditions that evolve over the life of the intervention. Where applicable an <u>assessment of bio-physical factors</u> that may affect the sustainability of project outcomes may also be included.

i.   *Socio-political Sustainability*

The Evaluation will assess the extent to which social or political factors support the continuation and further development of the benefits derived from project outcomes. It will consider the level of ownership, interest and commitment among government and other stakeholders to take the project achievements forwards. In particular the Evaluation will consider whether individual capacity development efforts are likely to be sustained.

ii. *Financial Sustainability*

Some project outcomes, once achieved, do not require further financial inputs, e.g. the adoption of a revised policy. However, in order to derive a benefit from this outcome further management action may still be needed e.g. to undertake actions to enforce the policy. Other project outcomes may be dependent on a continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new natural resource management approach. The Evaluation will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where a project's outcomes have been extended into a future project phase. <u>Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.</u>

iii. *Institutional Sustainability*

The Evaluation will assess the extent to which the sustainability of project outcomes (especially those relating to policies and laws) is dependent on issues relating to institutional frameworks and governance. It will consider whether institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. are robust enough to continue delivering the benefits associated with the project outcomes after project closure. In particular, the Evaluation will consider whether institutional capacity development efforts are likely to be sustained.

Factors affecting this criterion may include:
- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equality (e.g. where interventions are not inclusive, their sustainability may be undermined)
- Communication and public awareness
- Country ownership and driven-ness

K. *Factors Affecting Project Performance and Cross-Cutting Issues*

(These factors are rated in the ratings table but are discussed within the Main Evaluation Report as cross-cutting themes as appropriate under the other evaluation criteria, above. If these issues have not been addressed under the evaluation criteria above, then independent summaries of their status within the evaluated project should be given.)

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[40] *As used here, 'sustainability' means the long-lasting maintenance of outcomes and consequent impacts, whether environmental or not. This is distinct from the concept of sustainability in the terms 'environmental sustainability' or 'sustainable development', which imply 'not living beyond our means' or 'not diminishing global environmental benefits' (GEF STAP Paper, 2019, Achieving More Enduring Outcomes from GEF Investment)*

i.   *Preparation and Readiness*

This criterion focuses on the inception or mobilisation stage of the project (i.e. the time between project approval and first disbursement). The Evaluation will assess whether appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilisation. In particular the Evaluation will consider the nature and quality of engagement with stakeholder groups by the project team, the confirmation of partner capacity and development of partnership agreements as well as initial staffing and financing arrangements. *(Project preparation is included in the template for the assessment of Project Design Quality).*

ii.   *Quality of Project Management and Supervision*

In some cases 'project management and supervision' may refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, it may refer to the project management performance of an implementing partner and the technical backstopping and supervision provided by UNEP. The performance of parties playing different roles should be discussed and a rating provided for both types of supervision (UNEP/Implementing Agency; Partner/Executing Agency) and the overall rating for this sub-category established as a simple average of the two.

The Evaluation will assess the effectiveness of project management with regard to: providing leadership towards achieving the planned outcomes; managing team structures; maintaining productive partner relationships (including Steering Groups etc.); maintaining project relevance within changing external and strategic contexts; communication and collaboration with UNEP colleagues; risk management; use of problem-solving; project adaptation and overall project execution. Evidence of adaptive management should be highlighted.

iii.   *Stakeholder Participation and Cooperation*

Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs and target users of project outputs and any other collaborating agents external to UNEP and the implementing partner(s). The assessment will consider the quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. The inclusion and participation of all differentiated groups, including gender groups should be considered.

iv.   *Responsiveness to Human Rights and Gender Equality*

The Evaluation will ascertain to what extent the project has applied the UN Common Understanding on the human rights-based approach (HRBA) and the UN Declaration on the Rights of Indigenous People. Within this human rights context the Evaluation will assess to what extent the intervention adheres to UNEP's Policy and Strategy for Gender Equality and the Environment[41].

In particular the Evaluation will consider to what extent project implementation and monitoring have taken into consideration: (i) possible inequalities (especially those related to gender) in access to, and the control over, natural resources; (ii) specific vulnerabilities of disadvantaged groups (especially women, youth and children and those living with disabilities) to environmental degradation or disasters; and (iii) the role of disadvantaged groups (especially those related to gender) in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

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[41] *The Evaluation Office notes that Gender Equality was first introduced in the Project Review Committee Checklist in 2010 and, therefore, provides a criterion rating on gender for projects approved from 2010 onwards. Equally, it is noted that policy documents, operational guidelines and other capacity building efforts have only been developed since then and have evolved over time. https://wedocs.unep.org/bitstream/handle/20.500.11822/7655/-Gender_equality_and_the_environment_Policy_and_strategy-2015Gender_equality_and_the_environment_policy_and_strategy.pdf.pdf?sequence=3&isAllowed=y*

Note that the project's effect on equality (i.e. promoting human rights, gender equality and inclusion of those living with disabilities and/or belonging to marginalised/vulnerable groups) should be included within the TOC as a general driver or assumption where there is no dedicated result within the results framework. If an explicit commitment on this topic is made within the project document then the driver/assumption should also be specific to the described intentions.

v.   *Environmental and Social Safeguards*

UNEP projects address environmental and social safeguards primarily through the process of environmental and social screening at the project approval stage, risk assessment and management (avoidance, minimization, mitigation or, in exceptional cases, offsetting) of potential environmental and social risks and impacts associated with project and programme activities. The Evaluation will confirm whether UNEP requirements[42] were met to: *review* risk ratings on a regular basis; *monitor* project implementation for possible safeguard issues; *respond* (where relevant) to safeguard issues through risk avoidance, minimization, mitigation or offsetting and r*eport* on the implementation of safeguard management measures taken. UNEP requirements for proposed projects to be screened for any safeguarding issues; for sound environmental and social risk assessments to be conducted and initial risk ratings to be assigned, are evaluated above under Quality of Project Design).

The Evaluation will also consider the extent to which the management of the project <u>minimised UNEP's environmental footprint.</u>

vi.   *Country Ownership and Driven-ness*

The Evaluation will assess the quality and degree of engagement of government / public sector agencies in the project. While there is some overlap between Country Ownership and Institutional Sustainability, this criterion focuses primarily on the forward momentum of the intended projects results, i.e. either a) moving forwards from outputs to project outcomes or b) moving forward from project outcomes towards intermediate states. The Evaluation will consider the engagement not only of those directly involved in project execution and those participating in technical or leadership groups, but also those official representatives whose cooperation is needed for change to be embedded in their respective institutions and offices (e.g. representatives from multiple sectors or relevant ministries beyond Ministry of Environment). This factor is concerned with the level of ownership generated by the project over outputs and outcomes and that is necessary for long-lasting impact to be realised. Ownership should extend to all gender and marginalised groups.

vii.   *Communication and Public Awareness*

The Evaluation will assess the effectiveness of: a) communication of learning and experience sharing between project partners and interested groups arising from the project during its life and b) public awareness activities that were undertaken during the implementation of the project to influence attitudes or shape behaviour among wider communities and civil society at large. The Evaluation should consider whether existing communication channels and networks were used effectively, including meeting the differentiated needs of gendered or marginalised groups, and whether any feedback channels were established. <u>Where knowledge sharing platforms have been established under a project the Evaluation will comment on the sustainability of the communication channel under either socio-political, institutional or financial sustainability, as appropriate.</u>

Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

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[42] *For the review of project concepts and proposals, the Safeguard Risk Identification Form (SRIF) was introduced in 2019 and replaced the Environmental, Social and Economic Review note (ESERN), which had been in place since 2016. In GEF projects safeguards have been considered in project design since 2011.*

The Terminal Evaluation will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used as appropriate to determine project achievements against the expected outputs, outcomes and impacts. It is highly recommended that the consultants maintain close communication with the project team and promotes information exchange throughout the Evaluation implementation phase in order to increase their (and other stakeholder) ownership of the evaluation findings. Where applicable, the consultants will provide a geo-referenced map that demarcates the area covered by the project and, where possible, provide geo-reference photographs of key intervention sites (e.g. sites of habitat rehabilitation and protection, pollution treatment infrastructure, etc.)

The findings of the Evaluation will be based on the following:

(a) A desk review of:
- Relevant background documentation;
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence etc.;
- Project deliverables.
- Mid-Term Review or Mid-Term Evaluation of the project;
- Evaluations/reviews of similar projects.

(b) **Interviews** (individual or in group) with:
- UNEP Project Manager (PM);
- Project management team, where appropriate;
- UNEP Fund Management Officer (FMO);
- Project partners, including:
- Sub-Programme Coordinator;
- Relevant resource persons;
- Representatives from civil society and specialist groups (such as women's, farmers and trade associations etc).

(c) Surveys
(d) **Field visits** [for PIMS 2062, 3 countries were involved. Based on preliminary discussions with the Project Manager, it would be interesting to compare the achievements of the project in South Africa (Cape Town) versus its achievements in Kenya (Nairobi) or Ethiopia (Addis Ababa), to be decided during Inception phase once the evaluand has been completely defined].
(e) Other data collection tools

12.   **Evaluation Deliverables and Review Procedures**

The Evaluation Team will prepare:

Inception Report: (see Annex 1 for a list of all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation schedule.

Preliminary Findings: typically in the form of a PowerPoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings. In the case of highly strategic project/portfolio evaluations or evaluations with an Evaluation Reference Group, the preliminary findings may be presented as a word document for review and comment.

Draft and Final Evaluation Report: containing an executive summary that can act as a stand-alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.

An **Evaluation Brief** (a 2-page overview of the evaluand and evaluation findings) for wider dissemination through the UNEP website may be required. This will be discussed with the Evaluation Manager no later than during the finalization of the Inception Report.

Review of the Draft Evaluation Report. The Evaluation Team will submit a draft report to the Evaluation Manager and revise the draft in response to their comments and suggestions. Once a draft of adequate quality has been peer-reviewed and accepted, the Evaluation Manager will share the cleared draft report with the Project Manager/Implementing Partner, who will alert the Evaluation Manager in case the report contains any blatant factual errors. The Evaluation Manager will then forward the revised draft report (corrected by the Evaluation Team where necessary) to other project stakeholders, for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions as well as providing feedback on the proposed recommendations and lessons. Any comments or responses to draft reports will be sent to the Evaluation Manager for consolidation. The Evaluation Manager will provide all comments to the Evaluation Consultants for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

Based on a careful review of the evidence collated by the Evaluation Consultants and the internal consistency of the report, the Evaluation Manager will provide an assessment of the ratings in the final Main Evaluation Report. Where there are differences of opinion between the evaluator and the Evaluation Manager on project ratings, both viewpoints will be clearly presented in the final report. The Evaluation Office ratings will be considered the final ratings for the project.

The Evaluation Manager will prepare a **quality assessment** of the first draft of the Main Evaluation Report, which acts as a tool for providing structured feedback to the Evaluation Consultants. The quality of the final report will be assessed and rated against the criteria specified in template listed in Annex 1 and this assessment will be appended to the Final Evaluation Report.

At the end of the evaluation process, the Evaluation Office will prepare a **Recommendations Implementation Plan** in the format of a table, to be completed and updated at regular intervals by the Project Manager. The Evaluation Office will track compliance against this plan on a six-monthly basis for a maximum of 12 months.

13.   The Evaluation Team

For this Evaluation, the Evaluation Team will consist of a Principal Evaluator supported by one Support Consultant who will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager [Fabio Fisicaro], in consultation with the UNEP Project Manager [Charles Sebukeera], Fund Management Officer [Nada Matta] and the Sub-programme Coordinator of the Science – Policy UNEP Sub-programme, [Rula Qalyoubi]. The consultants will liaise with the Evaluation Manager on any procedural and methodological matters related to the Evaluation, including travel. It is, however, each consultants' individual responsibility (where applicable) to arrange for their visas and immunizations as well as to plan meetings with stakeholders, organize online surveys, obtain documentary evidence and any other logistical matters related to the assignment. The UNEP Project Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the Evaluation as efficiently and independently as possible.

The Principal Evaluator will be hired over a period of 8 months [01 May 2023 to 31 December 2023] and should have the following: a university degree in environmental sciences, international development or other relevant political or social sciences area is required and an advanced degree in the same areas is desirable; a minimum of 6 years of technical / evaluation experience are required, preferably including evaluating large, regional or global programmes

and using a Theory of Change approach; and a good/broad understanding of air and/or water quality monitoring is desired. English and French are the working languages of the United Nations Secretariat. For this consultancy, fluency in oral and written English is a requirement. Working knowledge of the UN system and specifically the work of UNEP is an added advantage. The work will be home-based with possible field visits.

The Support Consultant will be hired over a period of 8 months [01 May 2023 to 31 December 2023]; and should have the following: a university degree in environmental sciences, international development or other relevant political or social sciences area is required and an advanced degree in the same areas is desirable. A minimum of 6 years of experience working in activities related to air and/or water quality monitoring are required. English and French are the working languages of the United Nations Secretariat. For this consultancy, fluency in oral and written English is a requirement. Working knowledge of the UN system and specifically the work of UNEP is an added advantage. The work will be home-based with possible field visits.

Specific Responsibilities for the Principal Evaluator:

The Principal Evaluator will be responsible, in close consultation with the Evaluation Manager, for overall management of the Evaluation and timely provision of its outputs. Specifically, manage the inception phase of the evaluation, coordinate the data collection and analysis phase of the evaluation, coordinate the reporting phase, and manage internal and external relations of the evaluation team.

Specific Responsibilities for the Support Consultant:

The Support Consultant will make substantive and high-quality contributions to the evaluation process and outputs. The Support Consultant will provide substantive contributions to the inception phase of the evaluation, substantive contributions to the data collection and analysis, substantive contributions to the main report and ensure good teamwork and external relations.

The two consultants will ensure together that all evaluation criteria and questions are adequately covered.

The Evaluation Team members will undertake the following:

Inception phase of the Evaluation, including:
- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review and interview protocols;
- draft the survey protocols (if relevant);
- develop and present criteria for country and/or site selection for the evaluation mission;
- plan the evaluation schedule;
- prepare the Inception Report, incorporating comments until approved by the Evaluation Manager

Data collection and analysis phase of the Evaluation, including:
- conduct further desk review and in-depth interviews with project implementing and executing agencies, project partners and project stakeholders;
- (where appropriate and agreed) conduct an evaluation mission(s) to selected countries, visit the project locations, interview project partners and stakeholders, including a good representation of local communities. Ensure independence of the Evaluation and confidentiality of evaluation interviews.
- regularly report back to the Evaluation Manager on progress and inform of any possible problems or issues encountered and;
- keep the Project Manager informed of the evaluation progress.

Reporting phase, including:
- draft the Main Evaluation Report, ensuring that the evaluation report is complete, coherent and consistent with the Evaluation Manager guidelines both in substance and style;
- liaise with the Evaluation Manager on comments received and finalize the Main Evaluation Report, ensuring that comments are taken into account until approved by the Evaluation Manager
- prepare a Response to Comments annex for the main report, listing those comments not accepted by the Evaluation Consultants and indicating the reason for the rejection; and
- (where agreed with the Evaluation Manager) prepare an Evaluation Brief (2-page summary of the evaluand and the key evaluation findings and lessons)

Managing relations, including:
- maintain a positive relationship with evaluation stakeholders, ensuring that the evaluation process is as participatory as possible but at the same time maintains its independence;
- communicate in a timely manner with the Evaluation Manager on any issues requiring its attention and intervention.

14.   Schedule of the Evaluation

The table below presents the tentative schedule for the Evaluation.

Table 3. Tentative schedule for the Evaluation

Milestone	Tentative Dates
Evaluation Initiation Meeting	Early May 2023
Inception Report	June 2023
Evaluation Mission	July 2023
E-based interviews, surveys etc.	July-August 2023
Powerpoint/presentation on preliminary findings and recommendations	September 2023
Draft report to Evaluation Manager (and Peer Reviewer)	October 2023
Draft Report shared with UNEP Project Manager and team	November 2023
Draft Report shared with wider group of stakeholders	December 2023
Final Report	December 2023
Final Report shared with all respondents	December 2023

15.   Contractual Arrangements

Evaluation Consultants will be selected and recruited by the Evaluation Office of UNEP under an individual Special Service Agreement (SSA) on a "fees only" basis (see below). By signing the service contract with UNEP/UNON, the consultants certify that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, they will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units. All consultants are required to sign the Code of Conduct Agreement Form.

Fees will be paid on an instalment basis, paid on acceptance by the Evaluation Manager of expected key deliverables. The schedule of payment is as follows:

Schedule of Payment for the [Principal Evaluator]:

Deliverable	Percentage Payment
Approved Inception Report (as per Annex 2 document #9)	30%
Approved Draft Main Evaluation Report (as per Annex 2 document #10)	30%
Approved Final Main Evaluation Report	40%

Schedule of Payment for the [Support Consultant]:

Deliverable	Percentage Payment
Approved Inception Report (as per Annex 2 document #9)	30%
Approved Draft Main Evaluation Report (as per Annex 2 document #10)	30%
Approved Final Main Evaluation Report	40%

Fees only contracts: Where applicable, air tickets will be purchased by UNEP and 75% of the Daily Subsistence Allowance for each authorised travel mission will be paid up front. Local in-country travel will only be reimbursed where agreed in advance with the Evaluation Manager and on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.

The consultants may be provided with access to UNEP's information management systems (e.g PIMS, Anubis, Sharepoint etc.) and if such access is granted, the consultants agree not to disclose information from that system to third parties beyond information required for, and included in, the evaluation report.

In case the consultants are not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UNEP Evaluation Office, payment may be withheld at the discretion of the Director of the Evaluation Office until the consultants have improved the deliverables to meet UNEP's quality standards.

If the consultants fail to submit a satisfactory final product to UNEP in a timely manner, i.e. before the end date of their contract, the Evaluation Office reserves the right to employ additional human resources to finalize the report, and to reduce the consultants' fees by an amount equal to the additional costs borne by the Evaluation Office to bring the report up to standard[43].

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[43] This may include contract cancellation in-line with prevailing UN Secretariat rules.

ANNEX VII. QUALITY ASSESSMENT OF THE EVALUATION REPORT

Quality Assessment of the Evaluation Report

Evaluand Title:

Terminal Evaluation: "Sustainable Water and Air Quality Monitoring and Assessment Systems in Africa (Pilot Project)" (PIMS ID 2062)
Evaluator: Geraldo Carreiro and Renaud Hourcade

All UNEP evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills.

	UNEP Evaluation Office Comments	Final Report Rating
Report Quality Criteria		
Quality of the Executive Summary Purpose: acts as a stand alone and accurate summary of the main evaluation product, especially for senior management. To include: • concise overview of the evaluation object • clear summary of the evaluation objectives and scope • overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria • reference to where the evaluation ratings table can be found within the report • summary response to key strategic evaluation questions • summary of the main findings of the exercise/synthesis of main conclusions • summary of lessons learned and recommendations.	Final report *(coverage/omissions):* All required elements are addressed. Final report *(strengths/weaknesses)*: The Executive Summary represents a stan-alone and accurate summary of the evaluation report.	5
Quality of the 'Introduction' Section Purpose: introduces/situates the evaluand in its institutional context, establishes its main parameters (time, value, results, geography) and the purpose of the evaluation itself. To include: • institutional context of the project (sub-programme, Division, Branch etc) • date of PRC approval, project duration and start/end dates • number of project phases (where appropriate) • results frameworks to which it contributes (e.g. POW Direct Outcome) • coverage of the evaluation (regions/countries where implemented	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* All elements addressed to a satisfactory manner.	5

• implementing and funding partners • total secured budget • whether the project has been evaluated in the past (e.g. mid-term, external agency etc.) • concise statement of the purpose of the evaluation and the key intended audience for the findings.		
Quality of the 'Evaluation Methods' Section Purpose: provides reader with clear and comprehensive description of evaluation methods, demonstrates the credibility of the findings and performance ratings. To include: • description of evaluation data collection methods and information sources • justification for methods used (e.g. qualitative/ quantitative; electronic/face-to-face) • number and type of respondents *(see table template)* • selection criteria used to identify respondents, case studies or sites/countries visited • strategies used to increase stakeholder engagement and consultation • methods to include the voices/experiences of different and potentially excluded groups (e.g. vulnerable, gender, marginalised etc) • details of how data were verified (e.g. triangulation, review by stakeholders etc.) • methods used to analyse data (scoring, coding, thematic analysis etc) • evaluation limitations (e.g. low/ imbalanced response rates across different groups; gaps in documentation; language barriers etc) • ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected. Is there an ethics statement? E.g. *'Throughout the evaluation process and in the compilation of the Final Evaluation Report efforts have been made to represent the views of both mainstream and more marginalised groups. All efforts to provide respondents with anonymity have been made.*	Final report *(coverage/omissions):* Elements addressed to a satisfactory manner. Final report *(strengths/weaknesses):* The section presents a comprehensive description of the evaluation methods used, including the key evaluation methods applied, evaluation analysis and the limitations of the evaluation.	5
Quality of the 'Project' Section Purpose: describes and verifies key dimensions of the evaluand relevant to assessing its performance. To include:	Final report *(coverage/omissions):* All elements are well addressed. Final report *(strengths/weaknesses):*	5

• *Context:* overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses) • *Results framework*: summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • *Stakeholders:* description of groups of targeted stakeholders organised according to relevant common characteristics • *Project implementation structure and partners:* description of the implementation structure with diagram and a list of key project partners • *Changes in design during implementation:* any key events that affected the project's scope or parameters should be described in brief in chronological order • *Project financing:* completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing	The report presents a comprehensive analysis of the key dimensions of the evaluand required.	
Quality of the Theory of Change Purpose: to set out the TOC at Evaluation in diagrammatic and narrative forms to support consistent project performance; to articulate the causal pathways with drivers and assumptions and justify any reconstruction necessary to assess the project's performance. To include: • description of how the *TOC at Evaluation*[44] was designed (who was involved etc) • confirmation/reconstruction of results in accordance with UNEP definitions • articulation of causal pathways • identification of drivers and assumptions • identification of key actors in the change process • summary of the reconstruction/results re-formulation in tabular form. *The two results hierarchies (original/formal revision and reconstructed) should be presented as a two-column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'. This table may have initially been presented in*	Final report *(coverage/omissions):* All elements well addressed. The table (6) with the reformulated results statements is also included in this section. Final report *(strengths/weaknesses):* The ToC at Evaluation is well presented both in narrative and diagrammatic forms. The causal pathways are articulated, and the drivers and assumptions presented.	5.5

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[44] During the Inception Phase of the evaluation process a *TOC at Evaluation Inception* is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions), formal revisions and annual reports etc. During the evaluation process this TOC is revised based on changes made during project intervention and becomes the *TOC at Evaluation*.

the Inception Report and should appear somewhere in the Main Evaluation report.		
Quality of Key Findings within the Report Presentation of evidence: nature of evidence should be clear (interview, document, survey, observation, online resources etc) and evidence should be explicitly triangulated unless noted as having a single source. Consistency within the report: all parts of the report should form consistent support for findings and performance ratings, which should be in line with UNEP's Criteria Ratings Matrix. Findings Statements (where applicable): The frame of reference for a finding should be an individual evaluation criterion or a strategic question from the TOR. **A finding should go beyond description and uses analysis to provide insights that aid learning specific to the evaluand.** In some cases a findings statement may articulate a key element that has determined the performance rating of a criterion. Findings will frequently provide insight into 'how' and/or 'why' questions.	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* Although not containing specifically labelled 'Findings Statements', the report does provide insights into the challenges faced by the project and its achievements. Nature of evidence is also clear.	5

Quality of 'Strategic Relevance' Section
Purpose: to present evidence and analysis of project strategic relevance with respect to UNEP, partner and geographic policies and strategies at the time of project approval.
To include:
Assessment of the evaluand's relevance vis-à-vis:
   • Alignment to the UNEP Medium Term Strategy (MTS), Programme of Work (POW) and Strategic Priorities
   • Alignment to Donor/GEF/Partners Strategic Priorities
   • Relevance to Regional, Sub-regional and National Environmental Priorities
   • Complementarity with Existing Interventions: complementarity of the project at design (or during inception/mobilisation[45]), with other interventions addressing the needs of the same target groups.
	Final report *(coverage/omissions):*
	
	Final report *(strengths/weaknesses):*
	
	All elements are well addressed.
		5.5

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[45] A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

Quality of the 'Quality of Project Design' Section Purpose: to present a summary of the strengths and weaknesses of the project design, on the basis that the detailed assessment was presented in the Inception Report.	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* The section presents a comprehensive summary of the project design's strengths and weaknesses.	5
Quality of the 'Nature of the External Context' Section Purpose: to describe and recognise, when appropriate, key <u>external</u> features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval[46]), and how they affected performance. While additional details of the implementing context may be informative, this section should clearly record whether or not a major and unexpected disrupting event took place during the project's life in the implementing sites.	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* The section well describes the features that affected the project implementation.	5
Quality of 'Effectiveness' Section **(i) Availability of Outputs:** Purpose: to present a well-reasoned, complete and evidence-based assessment of the outputs made available to the intended beneficiaries. To include: • a convincing, evidence-supported and clear presentation of the outputs made available by the project compared to its approved plans and budget • assessment of the nature and scale of outputs versus the project indicators and targets • assessment of the timeliness, quality and utility of outputs to intended beneficiaries • identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* An analysis on the availability of the project outputs is presented in a table that shows the degree of achievement of their respective targets.	5

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[46] Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team.

ii) Achievement of Project Outcomes: Purpose: to present a well-reasoned, complete and evidence-based assessment of the uptake, adoption and/or implementation of outputs by the intended beneficiaries. This may include behaviour changes at an individual or collective level. To include: • a convincing and evidence-supported analysis of the uptake of outputs by intended beneficiaries • assessment of the nature, depth and scale of outcomes versus the project indicators and targets • discussion of the contribution, credible association and/or attribution of outcome level changes to the work of the project itself • any constraints to attributing effects to the projects' work • identification of positive or negative effects of the project on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	Final report *(coverage/omissions):* Elements are well addressed. Final report *(strengths/weaknesses):* The report presents an evidence-based assessment of the achievement of project outcome.	5.5
(iii) Likelihood of Impact: Purpose: to present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact, including an assessment of the extent to which drivers and assumptions necessary for change to happen, were seen to be holding. To include: • an explanation of how causal pathways emerged and change processes can be shown • an explanation of the roles played by key actors and change agents • explicit discussion of how drivers and assumptions played out • identification of any unintended negative effects of the project, especially on disadvantaged groups, including those with specific needs due to gender, vulnerability or marginalisation (e.g. through disability).	Final report *(coverage/omissions):* All elements are addressed. Final report *(strengths/weaknesses):* The section well discusses to what extent drivers and assumptions between the different levels of results are expected to hold.	5.5
Quality of 'Financial Management' Section Purpose: to present an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table (may be annexed). Consider how well the report addresses the following: • *adherence* to UNEP's financial policies and procedures	Final report *(coverage/omissions):* An analysis of the three dimensions evaluated under financial management is presented. Financial management tables are also included. Final report *(strengths/weaknesses):*	4.5

• *completeness* of financial information, including the actual project costs (total and per activity) and actual co-financing used • *communication* between financial and project management staff	The report could have included more evidence on *adherence to UNEP's financial policies and procedures* and *communication between financial and project management staff*.	
Quality of 'Efficiency' Section Purpose: to present an integrated analysis of all dimensions evaluated under efficiency (i.e. the primary categories of cost-effectiveness and timeliness). To include: • time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • discussion of making use, during project implementation, of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • implications of any delays and no cost extensions • the extent to which the management of the project minimised UNEP's environmental footprint.	Final report *(coverage/omissions):* Elements addressed to a satisfactory manner. Final report *(strengths/weaknesses):* The section discusses aspects related to the timeliness and cost-effectiveness of project execution.	5
Quality of 'Monitoring and Reporting' Section Purpose: to present well-reasoned, complete and evidence-based assessment of the evaluand's monitoring and reporting. Consider how well the report addresses the following: • quality of the monitoring design and budgeting *(including SMART results with measurable indicators, resources for MTE/R etc.)* • quality of monitoring of project implementation *(including use of monitoring data for adaptive management)* • quality of project reporting *(e.g. PIMS and donor reports)* \	Final report *(coverage/omissions):* Elements addressed to a satisfactory manner. Final report *(strengths/weaknesses):* The section presents a detailed and integrated analysis of the three dimensions evaluated under 'Monitoring and Reporting'.	5
Quality of 'Sustainability' Section Purpose: to present an integrated analysis of all dimensions evaluated under sustainability (i.e. the endurance of benefits achieved at outcome level). Consider how well the report addresses the following: • socio-political sustainability • financial sustainability • institutional sustainability	Final report *(coverage/omissions):* Elements addressed to a satisfactory manner. Final report *(strengths/weaknesses):* An integrated analysis of the three dimensions under sustainability is provided with sufficient evidence.	5

Quality of Factors Affecting Performance Section Purpose: These factors are not always discussed in stand-alone sections and may be integrated in the other performance criteria as appropriate. However, if not addressed substantively in this section, a cross reference must be given to where the topic is addressed and that entry must be sufficient to justify the performance rating for these factors. Consider how well the evaluation report, either in this section or in cross-referenced sections, covers the following cross-cutting themes: • preparation and readiness • quality of project management and supervision[47] • stakeholder participation and co-operation • responsiveness to human rights and gender equality • environmental and social safeguards • country ownership and driven-ness • communication and public awareness	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* An assessment of all the factors affecting performance is presented as a stand-alone section within the report	5
Quality of the Conclusions Section **(i) Conclusions Narrative:** Purpose: to present summative statements reflecting on prominent aspects of the <u>performance of the evaluand as a whole</u>, they should be derived from the synthesized analysis of evidence gathered during the evaluation process. To include: • compelling narrative providing an integrated summary of the strengths and weakness in overall performance (achievements and limitations) of the project • clear and succinct response to the key strategic questions • human rights and gender dimensions of the intervention should be discussed explicitly (e.g. how these dimensions were considered, addressed or impacted on)	Final report *(coverage/omissions):* A response to the key strategic questions is also included in this section. Final report *(strengths/weaknesses):* The section presents a summary of the project strengths and weaknesses, findings and ratings.	5.5
ii) Utility of the Lessons: Purpose: to present both positive and negative lessons that have potential for wider application and use (replication and	Final report *(coverage/omissions):* Three lessons learned identified.	5

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[47] In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UNEP. This includes providing the answers to the questions on Core Indicator Targets, stakeholder engagement, gender responsiveness, safeguards and knowledge management, required for the GEF portal.

generalization) Consider how well the lessons achieve the following: • are rooted in real project experiences (i.e. derived from explicit evaluation findings or from problems encountered and mistakes made that should be avoided in the future) • briefly describe the context from which they are derived and those contexts in which they may be useful • do not duplicate recommendations	**Final report** *(strengths/weaknesses):* The lessons learned are derived from project experiences and challenges identified.	
(iii) Utility and Actionability of the Recommendations: <u>Purpose:</u> to present proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results. Consider how well the lessons achieve the following: • are feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when • include at least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions • represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations. <u>NOTES:</u> **(i)** In cases where the recommendation is addressed to a third party, compliance can only be monitored and assessed where a contractual/legal agreement remains in place. Without such an agreement, the recommendation should be formulated to say that UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner. The effective transmission by UNEP of the recommendation will then be monitored for compliance. **(ii)** Where a new project phase is already under discussion or in preparation with the same third party, a recommendation can be made to address the issue in the next phase.	**Final report** *(coverage/omissions):* There recommendations proposed. **Final report** *(strengths/weaknesses):* The recommendations are feasible to implement and have a measurable performance target.	5
Quality of Report Structure and Presentation **(i) Structure and completeness of the report:** To what extent does the report follow the Evaluation Office structure and formatting guidelines? Are all requested Annexes included and complete?	**Final report** *(coverage/omissions):* **Final report** *(strengths/weaknesses):* The report follows the Evaluation Office guidelines.	5.5

(ii) Writing and formatting: Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information?	Final report *(coverage/omissions):* Final report *(strengths/weaknesses):* The report is clear and well written. The tone is adequate.	5.5
OVERALL REPORT QUALITY RATING		**5.1**

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1. The overall quality of the evaluation report is calculated by taking the mean score of all rated quality criteria.

At the end of the evaluation, compliance of the underlined evaluation process against the agreed standard procedures is assessed, based on the table below. *All questions with negative compliance must be explained further in the table below.*

Evaluation Process Quality Criteria	Compliance	
	Yes	No
Independence:		
1. Were the Terms of Reference drafted and finalised by the Evaluation Office?	X	
2. Were possible conflicts of interest of proposed Evaluation Consultant(s) appraised and addressed in the final selection?	X	
3. Was the final selection of the Evaluation Consultant(s) made by the Evaluation Office?	X	
4. Was the evaluator contracted directly by the Evaluation Office?	X	
5. Was the Evaluation Consultant given direct access to identified external stakeholders in order to adequately present and discuss the findings, as appropriate?	X	
6. Did the Evaluation Consultant raise any concerns about being unable to work freely and without interference or undue pressure from project staff or the Evaluation Office?		X
7. If Yes to Q6: Were these concerns resolved to the mutual satisfaction of both the Evaluation Consultant and the Evaluation Manager?		
Financial Management:		
8. Was the evaluation budget approved at project design available for the evaluation?	X	
9. Was the final evaluation budget agreed and approved by the Evaluation Office?	X	
10. Were the agreed evaluation funds readily available to support the payment of the evaluation contract throughout the payment process?	X	
Timeliness:		
11. If a Terminal Evaluation: Was the evaluation initiated within the period of six months before or after project operational completion? Or, if a Mid Term Evaluation: Was the evaluation initiated within a six-month period prior to the project's mid-point?	X	
12. Were all deadlines set in the Terms of Reference respected, as far as unforeseen circumstances allowed?	X	
13. Was the inception report delivered and reviewed/approved prior to commencing any travel?	X	
Project's engagement and support:		
14. Were the project team, Sub-Programme Coordinator and identified project stakeholders given an opportunity to provide comments on the evaluation Terms of Reference?	X	
15. Did the project make available all required/requested documents?	X	
16. Did the project make all financial information (and audit reports if applicable) available in a timely manner and to an acceptable level of completeness?	X	
17. Was adequate support provided by the project to the evaluator(s) in planning and conducting evaluation missions?	X	
18. Was close communication between the Evaluation Consultant, Evaluation Office and project team maintained throughout the evaluation?	X	
19. Were evaluation findings, lessons and recommendations adequately discussed with the project team for ownership to be established?	X	
20. Were the project team, Sub-Programme Coordinator and any identified project stakeholders given an opportunity to provide comments on the draft evaluation report?	X	
Quality assurance:		
21. Were the evaluation Terms of Reference, including the key evaluation questions, peer-reviewed?	X	
22. Was the TOC in the inception report peer-reviewed?	X	
23. Was the quality of the draft/cleared report checked by the Evaluation Manager and Peer Reviewer prior to dissemination to stakeholders for comments?	X	
24. Did the Evaluation Office complete an assessment of the quality of both the draft and final reports?	X	
Transparency:		
25. Was the draft evaluation report sent directly by the Evaluation Consultant to the Evaluation Office?	X	

26.	Did the Evaluation Manager disseminate (or authorize dissemination) of the cleared draft report to the project team, Sub-Programme Coordinator and other key internal personnel (including the Reference Group where appropriate) to solicit formal comments?	**X**	
27.	Did the Evaluation Manager disseminate (or authorize dissemination) appropriate drafts of the report to identified external stakeholders, including key partners and funders, to solicit formal comments?	**X**	
28.	Were all stakeholder comments to the draft evaluation report sent directly to the Evaluation Office	**X**	
29.	Did the Evaluation Consultant(s) respond adequately to all factual corrections and comments?	**X**	
30.	Did the Evaluation Office share substantive comments and Evaluation Consultant responses with those who commented, as appropriate?	**X**	

Provide comments / explanations / mitigating circumstances below for any non-compliant process issues.

Process Criterion Number	Evaluation Office Comments