UNDP ETHIOPIA COUNTRY OFFICE

PROJECT TERMINAL EVALUATION

"ETHIOPIAN NAMA: CREATING OPPORTUNITIES FOR MUNICIPALITIES TO PRODUCE AND OPERATIONALIZE SOLID WASTE TRANSFORMATION (COMPOST) PROJECT"

UNDP PIMS: 5541
GEF FOCAL AREA: ISWM & UGI
STRATEGIC PROGRAM OF GEF ID: 9048

EXECUTING ENTITY/IMPLEMENTING PARTNER: MINISTRY OF URBAN DEVELOPMENT AND CONSTRUCTION (MUDC)

RESPONSIBLE PARTNERS: CITY ADMINISTRATION OF ADAMA, BISHOFTU, BAHIR DAR, DIRE DAWA, HAWASSA AND MEKELLE

REGION: AFRICA
COUNTRY: ETHIOPIA

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LIST OF ACRONYMS AND ABBRIVIATIONS

AEMFI	Association of Micro-Finance Institutions
CCRUGDS	Climate Change Resilient Urban Green Development Strategy
CO	Country Office
COMPOST	Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation
COVID -19	Corona Virus Disease 2019
CRGE	Climate Resilient Green Economy
ESIA	Environmental and Social Impact Assessment
ESA	Ethiopian Standards Agency
FGD	Focus Group Discussion
EFCCC	Environment, Forest and Climate Change Commission
GEF	Global Environmental Facility
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GTP	Growth Transformation Plan
HoAREC	Horn of Africa Regional Environment Centre
IP	Implementing Partner
IPCC	Intergovernmental Panel on Climate Change
ISWM	Integrated Solid Waste Management
KII	Key Informant Interviews
LPC	Local Project Coordinators
MoANR	Ministry of Agriculture and Natural Resources
MoF	Ministry of Finance
MRV	Monitoring, Reporting and Verification
MOV	Means of Verification
MSE	Micro and Small-scale Enterprises
MtCO2e	Million tons of Carbon Dioxide Equivalent
MTE	Mid-term Evaluation
MUDC	Ministry of Urban Development and Construction
NAMA	Nationally Appropriate Mitigation Action
NGO	Non- Governmental Organization
NIM	National Implementation Modality
PMU	Project Management Unit
ProDoc	Project Document
PSC	Project Steering Committee
SDG	Sustainable Development Goal
SWM	Solid Waste Management
tCO2e	Tons of Carbon Dioxide Equivalent
TE	Terminal Evaluation
ToC	Theory of Change
UGI	Urban Green Infrastructure
ULG	Urban Local Government

ULGDP	Urban Productive Safety Net Programme
UNDP	United Nations Dvelopement Programme
UNDAF	United Nations Development Assistance Framework
UNEG	United Nations Evaluation Group
UNFCCC	United Nations Framework Convention on Climate Change

1.0 EXECUTIVE SUMMARY

I. Project Information Table

Table 1: Project Information Table

Project Details		**Project Milestones**	
Project Title	NAMA COMPOST	PIF Approval Date:	1 June 2015
UNDP Project ID (PIMS no):	5541	CEO Endorsement Date (FSP) /Approval date (MSP):	26 Aug 2016
GEF Project ID:	9048	ProDoc Signature Date:	21 Mar 2017
UNDP Atlas Business Unit, Award ID, Project ID:	00096338	Date Project Manager hired:	22 May 2018
Country/Countries:	Ethiopia	Inception Workshop Date:	1 Jun 2017
Region:	Africa	Mid-Term Review Completion Date:	8th July – 9 August 2019
Focal Area:	ISWM & UGI	Terminal Evaluation Completion date:	20th September-30th October, 2021
GEF Operational Programme or Strategic Priorities/ Objectives:	GEF-4 Strategic Objective 1: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.	Planned Operational Closure Date:	31st March, 2022
Trust Fund:	US$ 6,667,123		
Implementing Partner (GEF Executing Entity):	Ministry of Urban Development and Construction (MUDC), and City Administrations of Adama, Bishoftu, Bahir Dar, Dire Dawa, Hawassa and Mekelle		
NGOs/CBOs involvement:	CEFA (NGO) and More than 20 “Iddirs” (community organizations)		
Private sector involvement:	Koba Recycling		
Geospatial coordinates of project sites:			
Financial Information			
PDF/PPG	**at approval (US$M)**	**at PDF/PPG completion (US$M)**	
GEF PDF/PPG grants for project preparation	6,667,123		
Co-financing for project preparation			
Project including in kind	**at CEO Endorsement (US$M)**	**at TE (US$M)**	
[1] UNDP contribution:	5,754,000	6,463,200	
[2] Government:	40,861,869	41,676,581	
[3] Other multi-/bi-laterals:			
[4] Private Sector:	200,000	25,000	

[5] NGOs:	297,019	0
[6] Total co-financing [1 + 2 + 3 + 4 + 5]:	41,608,888	48,164,781
[7] Total GEF funding:	6,667,123	6,667,123
[8] Total Project Funding [6 + 7]	48,276,011	54,831,904

II. Brief Description of the project

The NAMA COMPOST project was designed and implemented with an objective of promoting greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in six Ethiopian cities and towns of Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle for a period of five years. At the end of the project on 31st March 2022, the project is expected to result in annual emission reductions from UGI initiatives and ISWM equal to approximately 306,000 and 132,321 tCO2e, respectively. These will accrue from the annual generation of 45,500 tons of compost from 152,000 tons of household organic waste, and the reforestation of 33,000 ha of degraded land by the end of the 5-year project lifetime. It is worth noting that, since the start of project implementation in 2017; remarkable achievements have been registered in ISWM, UGI, GHG emission reduction and job creation. The project has rehabilitated 31.871.96 (96%) ha of urban and peri-urban degraded area of land of its target and the amount of compost produced so far in the last five years is 109,220.70 (90%) of the target. The total CO2 emission reduced as a result of the project is 413 kilo tons Co2 (with 293 kilo tCo2 from UGI and 120-kilo tons Co2 from ISWM) interventions. The project has created a total of 68,051 jobs to people in the six project intervention areas, out of 45,596 jobs created during the reporting period, 17,468 (16,556 temporary, 912 permanent; 56% women) in ISWM and 28,128 (26,312 temporary, 1,816 permanent; 54% women) in UGI. The project has built capacity of federal and local government units and established systems for better SWM and UGI approaches.

III. Evaluation ratings Table using specified (TE rating scales ANNEX K)

Table 2: TE Ratings and achievement summary Table

No.	Area of TE Assessment	Rating
1	**Monitoring & Evaluation (M&E)**	**Rating**
	M&E design at entry	6= Highly Satisfactory (HS)
	M&E Plan Implementation	5= Satisfactory (S)
	Overall Quality of M&E	5= Satisfactory (S)
2	**Implementing Agency (IA) Implementation & Executing Agency (EA) Execution**	**Rating**
	Quality of UNDP Implementation/Oversight	6= Highly Satisfactory (HS)
	Quality of Implementing Partner Execution	6= Highly Satisfactory (HS)
	Overall quality of Implementation/Execution	6= Highly Satisfactory (HS)
3	**Assessment of Outcomes**	**Rating**
	Relevance	6= Highly Satisfactory (HS)
	Effectiveness	6= Highly Satisfactory (HS)
	Efficiency	5= Satisfactory (S)
	Overall Project outcome Rating	6= Highly Satisfactory (HS)
4	**Sustainability**	**Rating**
	Financial sustainability	4=Likely (L)
	Socio-political sustainability	4=Likely (L)

	Institutional framework and Governance sustainability	4=Likely (L)
	Environmental sustainability	4=Likely (L)
	Overall Likelihood of Sustainability	4=Likely (L)

IV. Summary of Findings and Conclusions

Project design/formulation

The project document and the results framework are aligned with the National priorities and Country driven-ness in addressing the key development challenges of ISWM and UGI. This is in line with the Ethiopian Climate Resilient Green Economy Strategy (CRGE) that has recognized the need for creating modern and clean cities and Ethiopia Growth and Transformation Plan-2 (GTP II) that has ambitious plan of producing organic compost by farming communities. The evaluation findings revealed that, project activities, outputs, indicators and objectives are clear in the results framework. The project outputs and indicators are well articulated and linked with the ISWM and UGI approaches addressing the broader city development issues and international environmental challenges of SWM and UGI. Indicators are SMART and there is a clear link between the problem analysis and the proposed solutions. The assumptions are relevant to the achievement of the Ethiopia NAMA COMPOST Project. However, there are some issues in the vertical and horizontal logic of the original results framework.

Consequently, changes in the log frame before and at the time of the MTE were recommended. For example, the NAMA COMPST Project Team and its Steering Committee made decisions on project design based on information gained during monitoring of project progress including proposing some changes to the result framework. These changes involved the modification of output 4.1 (operational municipal composting plants that are linked with the Agricultural Transformation Agency (ATA) blending facilities to progressively compliment blended chemical fertilizers with compost) but the revised ProDoc annex did not update that and it appears that ATA blending facilities were functional. In addition, the project recommended considerable revision of the indicators or their end-of-project (EOP) targets, namely drop indicator 1.6 as well as reduce EOP for output 1.1 indicators from 10 to 2, output 1.2 indicators from 6 to 1, and output 2.1 and 2.2 indicators from 24 to 12. These changes were officially approved by project steering committee on 16th January 2020.

Project Implementation

The project steering committee (PSC) made critical strategic decisions and amendments based on new and emerging needs. For instance, in the procurement of compost turner, transport facilities, compost fleece, digital thermometers and allocation of budget to pay salaries for MSEs members as a way of cushioning them from COVID-19 lockdown, this helped MSEs to continue working on SWM project activities. The project adopted **a** gender- inclusive approach that has continued during implementation, with partnerships been developed between project and regional, woredas and kebeles government agencies and with the city administration and MSEs at local level of project implementation. All cities, MoF, EFCCC, and ESA were involved during development and approval of AWP. The project was co-financed by different organizations both in cash and in-kind. The city administration allocated budget and other resources by providing staff/human resources, office space, and office supplies, vehicles and land for sheds' construction. They also allocated land for greenery, staff time, and equipment for compost production and financed project activities.

The Overall quality of M&E was rated as Satisfactory (5= S). The overall assessment of monitoring and evaluation shows that, laid down procedures have been followed correctly, and recommendations from the MTE were implemented. As part of the monitoring and evaluation (M&E) plan, independent external evaluators were engaged for both mid-term and terminal evaluations. Moreover, the project Environmental and Social Impact Assessment (ESIA) was conducted during implementation. ESIA recommended proper implementation of environmental monitoring and management systems and maximum safety and health procedures in compost the sheds during collection, segregation and processing of compost. The findings further revealed that, reporting of the project progress was conducted quarterly and annually prepared by the Project Manager and shared with the PSC.

Overall project implementation/Oversight and Execution was rated as Highly Satisfactory (6= HS). The findings indicated that, implementing partners (MUDC and the six cities) were committed to respond to the needs of the city dwellers in the management of waste as well as increasing the greenery to make the cities habitable. The current PMU based at MUDC has done a commendable job of project management and administration since their recruitment, with regular monitoring of project work, partner organizations and other project support provided by the UNDP CO.

The COVID-19 pandemic negatively affected MSEs and livelihoods of the beneficiaries. The sales stopped, the compost was closed and there was no market for the MSEs, a situation which made it difficult for them to continue with operations. They became disintegrated because they could not pay salaries for their staff working on the project which affected implementation of project activities and the the plastic waste market leading to reduced income of MSEs. In response to COVID 19 pandemic in the five cities, the project used additional funding secured from UNDP to support municipalities in cleaning illegal damping sites mainly river banks found within the center of the cities. They converted them into nursery sites and youth recreational areas through MSEs who provide coffee services and sale seedlings which have helped the MSEs to stay in the market.

Project Results and Impact

Table 8 in (section 4.3) presents an analysis of the progress towards objectives and output achievements based on indicators developed in the ProDoc. The progress towards achievement of overall project objective and expected outcomes was evaluated according to the UNDP-supported GEF-financed projects evaluation guidelines. The evaluation on progress towards objectives and expected outcomes was **rated Highly Satisfactory (6= HS)** in 10 out of 14 indicators, while 4 indicators 4 were rates as rated as **Satisfactory (5= S).**

Relevance

The NAMA COMPOST project is well placed within the local context and contributes to SDGs 8, 11, 13, and 8. Through the implementation of a Nationally Appropriate Mitigation Action component of outcome 3, it directly supports the UNDAF Outcome 5. The strengthening the regulatory and legal framework and institutional coordination mechanisms to integrate ISWM and UGI within urban systems under outcome 1 supports strategic objective of Ethiopian government's Urban Development and Micro and Small Enterprises Development Strategy Growth and Transformation Plan (GTP) in Ethiopia. The project is alignment with international frameworks such as the UNFCCC and UNDAF outcome 2. The project perfectly fits within the Ethiopia's sustainable development strategies, including the CRGE Strategy, the second phase of

its Growth and Transformation Plan (GTP) as well as its Urban Development and its Micro and Small Enterprises Development Strategy. Moreover, it is aligned with the Country's Urban Solid Waste Management and Urban Greenery Development Strategies and Standards. Finally, the project involved stakeholders at federal, regional and city administration level, and they were effectively consulted during the project design phase.

Effectiveness

The development objective of the project was to promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector. The project to a great extend has promoted greater use of SWM and UGI approaches. Although it has not achieved 100%, but 10 indicators out of 14 had been achieved. The remaining 4 are likely to be attained if there is continued political and stakeholder commitments.

The factors that contributed to achievement of outcomes and outputs are: the commitment of the implementing partners (MUDC, and the six cities) and UNDP in responding to the needs of the city dwellers in the management of waste and increasing the greenery the cities; the passionate Government Prime Minister Dr. Abiy Ahmed who mobilized people on greenery to plant 4 billion trees; financial support from GEF/UNDP and strong co-financing; ownership of the project by community members including the beneficiaries; coordination, supervision and management of the project by the PMC, Project Manager, PMU and city administrators; increased awareness creation of stakeholders to work in steering and technical committees to steer and guide the implementation and support the project; the job creation component of the project that is very attractive to the members; innovative problem solving nature of SWM and UGI to the municipality cleaning and greening the cities.

Efficiency

Project funds were managed efficiently and cost-effectively under good financial management practices. Financial management and disbursement procedures were generally well followed and the project is regarded to have been managed cost-effectively. Co-financing of the project through MUDC and City Administrations exceeded project expectations. The monitoring systems employed by the PMU, using annual work plans and milestones, verification by site visit were effective. Through green legacy, the project cost effectively used human, material, and financial resources, however, some project activities like construction of compost shed and developing a functioning recycling system experienced delays arising from the increasing cost of construction materials and inflation in the Country.

Overall project outcome

The overall project outcome was based on the rating for relevance, effectiveness and efficiency of the project, and it was **rated as 6= Highly Satisfactory (HS).**

Sustainability

The evaluation findings revealed that, NAMA project is likely to be sustainable after termination of technical cooperation between GEF/UNDP and the Government MUDC. This is because of training and capacity building, ssecuring title deeds for composting and greeneries, construction of compost sheds and rehabilitating infrastructure, institutionalization of ISWM and UGI standards and guidelines, creation of market linkages for MSEs to micro finance institutions, relevance of the project in addressing the challenges of SWM and UGI, and utilization of urban

agriculture sector approach where the city and the Ministry/ bureau of agriculture play a key role in buying compost from MSEs. This will benefit both MSEs and farmers who will potentially use compost, thereby promoting the project sustainability.

Overall likelihood of Sustainability

The evaluation findings indicate that, financial, socio-economic, environmental, institutional framework and governance risks that may affect sustainability of the project do exists. However these risks have been identified and they are being addressed using an already developed Sustainability Plan and Exit Strategy. Overall, the sustainability of project outcomes was rated at **4= Likely (L).**

Country Ownership

The city administration adopted and has been using ISWM and UGI guidelines and tools. Relevant stakeholders from city administration took part in project implementation, monitoring, and evaluation of project demonstrating project ownership. The cities are represented by the Mayor or his representative in National Steering Committee meetings. The have also adopted key documents of the project such as ISWM and UGI standards and tools which have already been approved and incorporated into the city development plans. Therefore, the project outcomes have been incorporated into the city and the regional development plans.

Gender equity and Women Empowerment

The gender inclusion and empowerment was strong and evident in the project. This gender dimension was demonstrated by availability of socio-economic benefits and services for women such as jobs created. For instance, out of 45,596 jobs created during the reporting period 56% were women in ISWM of 17,468 (16,556 temporary, 912 permanent) and 54% women in UGI of 28,128 (26,312 temporary, 1,816 permanent). There was training and capacity building of women; high level of women participation in the project; women access to micro-financial institutions and how gender discrimination was addressed by procuring a semi-automatic composting machine in order to narrow the gender gap.

Cross-cutting issues

The project has mainstreamed to a great extend knowledge management and communication with production of staff documentary film on project success stories and good practices; this was showed in a stakeholders' meeting in Adama city. In a workshop, government leaders from the federal, regional and city level participated and watched the video. After that film, participants asked different questions and discussed modalities on how they can replicate those good practices gained so far and scale up project interventions. The film and workshop outcomes were broadcasted through Fana Broadcasting Corporation media and were posted on the website of the Ministry of Urban Development and Construction.

Conclusion on the Project Objective: Promote significantly greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector.

The NAMA project objective was to promote significantly greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in Ethiopian cities and towns in

alignment with the National Growth and Transformation Plan for the urban sector. The project has promoted to a great extend the use of SWM and UGI approaches. Although it has not achieved 100%, but 10 indicators out of 14 had been achieved. The remaining 4 are likely to be attained if there is continued political and stakeholder commitments. The project implementation has achieved and exceeded some of the targets.

Conclusion on Outcome 1: Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban standards..

The project succeeded to create a regulatory and legal framework, institutional and coordination mechanisms, and tools for supporting the national policy environment. Basically, all project cities transposed ISWM and UGI standards into their context. This action was specifically essential for integrating ISWM and UGI within urban systems in the six cities of Hawassa, Adama, Bishoftu, Bahri Dar and Dire Dawa. The increased community ownership and sustainability of project interventions in solid waste management and UGI, guidelines, manuals and model MoU were developed, and cities have already been using them. However, the project did not achieve development of Resettlement Action Plan (RAP) for illegal settlers. Two issues are worth noting: (1) project activities were implemented in areas where there were less settlements with the objective of avoiding resettlement related tensions, and (2) the political situation and ongoing administration challenges hampered implementation of RAP.

Conclusion on Outcome 2: A Market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilisation.

The COMPOST project was instrumental for establishment and functioning of MSEs for ISWM-UGI value chain for the six project cities. As a result, MSEs developed the capacity to produce compost and earned income through compost selling to public institutions. On the contrary, public institutions in the city administrations and MSEs engaged in nursery business and afforestation and re-afforestation activities had easy access to MSEs Compost product for their greenery activities. Long term contracts were signed between different companies and MSEs both for compost and non-organic recyclable wastes sales. The project promoted compost and recyclable waste through contacting potential buyers via project management staff and recruited consultants. However, the project failed to establish voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives. This negatively impacted compost production and marketing potential. Therefore, there is a problem of ready market for SME because the market linkage so far mainly depends on buyers from government institutions.

Conclusion on Outcome 3: A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions.

The standard baselines were established for the six cities include: (i) compost production using the organic fraction of landfill waste; (ii) urban and peri-urban reforestation of degraded land; and (iii) replacement of non-renewable fuel wood with renewable biomass generated by well managed forests. The catalyse transformation of integrated urban systems is seen in developing and submitting to the UNFCCC of NAMA Registry with aim of providing robust and credible MRV for the GEF-financed project and scaling-up the COMPOST project beyond geographical boundaries supported by the GEF.

Conclusion on Outcome 4: Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework.

Six composting sheds were constructed and equipped with essential facilities which improved both the quantity and quality of compost production. The total annual compost production capacity of the cities reached more than 45,000 tones per city. A total of 109,220.7 tons of compost were produced from 363,704.93 tons of organic waste during the project period. Most importantly, the effectiveness of this project is manifested through linking composting and urban and peri-urban greening, contributing to GHG emission reduction and by diverting the organic fraction of waste from land fill which otherwise would emit methane to pollute the air and sequestering of carbon dioxide.

The project also protected environmental pollution by using compost as replacement for chemical fertilizers in urban greening. The project has achieved a total of 413 tons of carbon dioxide emission reduction with 293 kilo tCo2 from the greenery and 120-kilo tons of Co2 from composting activities. Reports and participants interviewed indicated that, soil and water conservation structures were built and this increased vegetation cover as a result of area enclosures and tree plantation on cliffs surrounding the cities. This has helped to retain the topsoil from erosion that leading to creation of favorable condition for regeneration of more vegetation covers. Therefore, the project has positively impacted on the environment through carbon sequestration, protection of biodiversity, reduction of land degradation and maintenance of ecosystem services.

V. Key Lessons learned

- *Lesson 1: Application of market based approach is beneficial for sustainable waste management and urban greenery development*. The compost produced from solid waste is sold to the city administration for plant nursery site on and afforestation and reforestation activities while MSE are engaged in raising seedlings for sale.
- *Lesson 2: Developing new ways of working in UGI is important for urban and peri-urban greenery area development.* The idea of nursery development, species selection, issuing of title deeds, management of MSEs is required for improving all components throughout the value chain rather than focusing only on tree plantation in order to sustainably solve bottle-necks in the sector.
- *Lesson 3: Solid waste recycling and composting is the key to clean the cities.* The start of solid waste recycling and composting has not only created jobs for many people engaged in the business but it also has contributed to the improvement of city cleanliness.
- *Lesson 4: System level capacity building in the cities contributes to achievement of project objectives and sustains outcomes.* Capacity building was considers a mandatory intervention. It covered Compost Standards and Guidelines, Certificate of Competency and Transposing Standards for ISWM and UGI sector.
- *Lesson 5: Creating Model Villages for cleaner and green city is effective in creating community awareness.* Awareness is done through door to door communication, school outreach programs, use of posters, community sensitization workshops as well as using national and local print and non- print media such as radio and television on waste handling and waste segregation.
- *Lesson 6: Stakeholder engagements and partnership brings project synergy in resource mobilization.* Partnerships with different units of the city administration, the World

Bank, universities, government investment units, the green legacy and building on others is the key to effective project implementation and mobilization of scarce resources.

- *Lesson 7: Engaging composters in waste collection results in better waste segregation and quality of compost.* The engaging of Micro and Small Enterprises has made the composting and waste collection practice more successful in the cities.
- *Lesson 8: The use of receipts for compost has better market linkage*. For instance, in Hawassa city, majority of compost buyers used for plant seedlings and urban green infrastructure development are the city administrators. The administrators responsible for urban cleaning and beautification has witnessed greenery areas such as city parks where compost is applied are becoming greener than areas where composted is not applied.
- *Lesson 9: Community ownership if fundamental for better environmental protection.* For example, in Bahir Dar, there is a community based greenery area management introduced by the project. Evidence shows that, the urban greenery areas managed by the community are take care off and more sustainable than areas where community plays no role.
- *Lesson 10: Project management dashboard is a useful tool for the PSC.* The dashboard helps the PSC to clearly understand and show when a target is achieved, on progress or is lagging behind. It therefore helps to monitor performance of each city against indicators for timely decision making.
- *Lesson 11: Creating opportunities to organize MSEs along Value Chain helps* them to raise more seedlings, grow their businesses and capacities and start selling to other cities.
- *Lesson 12: Peri-urban afforestation, reforestation and land titling* activities help to create a vibrant urban area under municipality plan and implementation of proper land use.
- *Lesson 13: Linkage between compost production and Urban and Peri urban afforestation and reforestation greening* is important because it connects compost producers and urban greenery MSEs, where compost produced is used for plantations in urban and peri urban areas and this gives confidence to the compost producers because of sustainable market.

VI. Recommendations Summary Table

Table 3: Recommendations Summary Table

No.	TE Recommendation	Entity Responsible	Time frame
1	There need to support SME'S by looking for ready markets for their products for social-economics sustainability to be achieved.	City Administration, MUDC	March, 2022
2	Consider continued financial and technical support to SMEs and beneficiaries of the project.	City Administration, MUDC/UNDP	March, 2022
3	Awareness creation to continue changing communities' attitudes towards ISWM and UGI. This is because changing people's attitudes to engage on sorting and transporting wastes requires a lot of efforts.	City Administration, MUDC/UNDP	March, 2022 and ongoing
4	Invest in research, training and capacity building in partnership with research institutions, universities for the purpose developing new innovations and products.	City Administration, MUDC	March, 2022 and ongoing

5	Implementation of risk management plans by identification and documentation of risks in order to mitigate project risks.	City Administration, MUDC/UNDP	March, 2022
6	Establishment of recreational Centres with different facilities such as sports that can help generate income and create more jobs for financial sustainability.	City Administration, MUDC/UNDP	No time frame
7	Establishment of small factories in the cities for processing of local wastes like plastic bottles and metals, rather than transporting crushed plastic wastes to Addis Ababa for processing.	City Administration, MUDC/UNDP	Continuous activity
8	Ensuring more private and public sectors involvement in compost marketing. This will benefit private and public sectors engaged in agriculture and greeneries as well as MSEs engaged in compost production.	City Administration, MUDC	March, 2022
9	Law enforcement to protect the rehabilitated areas and sites from illegal land grabbing and encroachments into the project sites in collaboration with key stakeholders	City Administration, MUDC/communities	Continuous activity
10	Promote more utilization of organic fertilizers in collaboration with MoANR, agricultural research institutions and NGOs to create demand for compost which is directly linked with agricultural market, sales and increased income	City Administration, MUDC	March, 2022
11	Undertake impact evaluation after the project is handed over to the communities.	UNDP	After March, 2022
12	Strengthen local and institutional capacity in monitoring and evaluation systems for project accountability and continuous learning.	City Administration, MUDC	March, 2022
13	Consider support afforestation and reforestation of 1,270ha of lands in five project cities.	UNDP	June 2022
14	Procurement, distribution and installation of balling machine in the five cities.	UNDP	June 2022
15	Determine the survival rates of planted seedlings per annum starting from 2021.	UNDP/MUDC	June 2022
16	Consider to grant a cost extension for the purpose of completing the remaining project activities by the PMU	UNDP	June 2022

2.0 INTRODUCTION

2.1 Purpose and objective of the TE

The purpose of this evaluation as spelled in the Terms of reference (TOR) was to conduct the terminal evaluation of the project: Ethiopian NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (COMPOST), and assess the achievement of project results against what was expected to be achieved.

2.2 Scope of the Evaluation

The UNDP Ethiopia terminal evaluation took a period of 40 days from 20th September, 2021 to 30th October, 2021. The evaluators consulted with the project stakeholders at National and beneficiaries at federal level in the cities of Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle including Addis Ababa. The evaluation covered the entire project timeframe, from 2017 to 2021 and consultants reviewed all project interventions which were conducted during project implementation. The TE evaluation covered three main areas which include; (i) project design/formulation, ii) project implementation and iii) project results and impacts, and assessed results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects.

2.3 Methodology and Approach

The consultants used mixed methods (qualitative and quantitative methods) to carry out this evaluation. Mixed methods approach is appropriated because it triangulates and utilizes data better than a separate method of qualitative or quantitative data collection and analysis method. Triangulation of information was achieved by combining information from different sources including review of project documents, review of secondary sources of information, key informant interviews, focus group discussions, and direct observations from field visits all which ensured that the information was valid, accurate and reliable. The evaluation was conducted in a participatory, inclusive and gender-inclusive approach by having consultative meetings, discussions and engagements with key project stakeholders. The evaluation assessed the project performance against expectations set of outcome indicators as outlined in the project's Logical Framework/Results Framework in line with the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects. The selections of the organizations and participants were carried out using purposive sampling techniques in consultation with the UNDP programme staff. The target population involved the UNDP programme staff; the Government Ministry of Urban and Construction; the six Administrative cites of Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle; the Environment, Forest and Climate Change Commission; Ethiopia Standardization Agency; Micro and Small Enterprises (MSEs); Regional Bureaus and beneficiaries representatives and the compost users.

2.4 Data Collection and Analysis

Data collection in this TE was conducted on performance indicators, that is, outputs, outcomes and impacts indicators as established in the project results framework to reflect the key results in

the project's theory of change. In pursuit of the overall evaluation purpose, evaluation matrix was developed with more specific evaluation questions to assess the project performance. Specifically, data was collected both qualitative and quantitative through documents reviews (*List of documents reviewed ANNEX M*); Key Informant Interviews (KII) with face- to- face in-depth interviews supplemented by virtual platforms through zoom interviews meetings with stakeholders who have knowledge and interest in the project due to COVID-19 pandemic restrictions and large area coverage (*detailed KII ANNEX D);* Focus Group Discussions (FGD) by organizing small groups of about 4-8 participants that are gender inclusive for the purpose of group discussions to generation ideas on progress, performance, implementation experiences, success, challenges and lessons learned *(detailed FGD ANNEX E*); review data from other secondary sources of information and direct observation by field visits to the project sites in five cities of Adama, Bahir Dar, Bishoftu, Dire Dawa and Hawassa , including Addis Ababa. This mission took place from October 4 to 16, 2021 where consultants interacted with stakeholders and project beneficiaries (see Annex G for Evaluation mission itinerary). A total of 19 KIIs and 16 FGDs were carried out throughout the visited cities.

A qualitative data analysis was conducted using content analysis and categorization of data into themes using notes from focus group discussions and key informant interviews. This data was entered into the computer in MS Word format and compiled to form general impressions and conclusions. Quantitative data analysis was conducted using descriptive statistics generated from secondary sources, and entered into a pre-prepared data entry template in Excel. Data was then uploaded into SPSS Statistical software (Version 23.0) and analysed to generate cross tabulations. The cross-tabulations were computed using Excel and compared with the data from the baseline survey and midterm review to develop a comparative picture of the findings. Qualitative data from focus group discussions, key informant interviews and field site visits was used to enrich the findings from the quantitative data through triangulation.

2.5 Ethics

The TE team paid a special attention to the ethical standards in conducting this evaluation in accordance with the principles outlined in the UNEG 'Ethical Guidelines for Evaluation'. The TE consultants ensured compliance with legal and other relevant codes of conduct governing collection of data and reporting on data, and safeguarded the rights and confidentiality of respondents and stakeholders. They assured the participants that, the information and data gathered in the evaluation activity was solely used for the purpose of this NAMA COMPOST project evaluation and not for any other uses without the express authorization of UNDP and partners. The consultants observed the principles of independence, impartiality, transparency, equality, participation, inclusiveness, credibility and utility for the purpose of aligning the process with the GEF-related objectives of promoting accountability, global environmental benefits, promoting learning, feedback and knowledge sharing. The consultants adhered to the ethical considerations and signed for acceptance to abide to the UNEG code of conduct for evaluators (Annex H).

2.6 Limitations to the Evaluation

The evaluation was limited to cover field itinerary in the Mekelle city due to security reasons. However, to mitigate this problem, the consultants adapted alternative data collection approaches including reviewing secondary sources, consultations with project stakeholders in Addis Ababa, and use of virtual communication platforms. During field visits, the UNDP CO provided all the necessary logistical and administrative support needed to facilitate productive gathering of data

and information from project beneficiaries and stakeholders at city level. Subjective perspective of the qualitative approach where respondents gave their side of the story on what they knew about the project was a limitation. This subjectivity was overcame by evaluators using specific probing questions during the key informant interviews to retrieve collective answers that best defined the reality of project implementation.

Quality of respondents selected from the national, regional, city and community levels had a chance of limiting this evaluation. To moderate this limitation, the evaluators in consultations with the UNDP programme staff conducted a comprehensive stakeholder analysis guided by the ProDoc to identify respondents who were directly involved in project and who had firsthand information about the NAMA COMPOST project. This selection was purposively sampled and further considered the additional criteria such as gender and location and active participation in the project to reach the population for the evaluation.

The evaluation was also limited to COVID-19 restrictions on meetings and level of interactions. The key issues were protecting respondents from any potential risk of contracting COVID-19 because of the evaluation team's intervention. To mitigate this limitation, the TE Team observed the following measures: restricting the number of participants as per COVID-19 restrictions, wearing masks during all stakeholder meetings and interviews, applying a strict no touching policy and arranging virtual meetings and interviews.

2.7 Structure of the TE report

The structure of this TE evaluation report is informed by the outline in the Terms of Reference as provided by UNDP Ethiopia CO as well as the guidance for undertaking terminal of projects supported by the UNDP with grant financing from the GEF financed projects. The TE report contains a "cover page" that provide general information about the project including the name of the project, UNDP PIMS and GEF ID, timeframe and date of final TE report, region and countries included in the project, GEF focal area/strategic program, executing agency, implementing partner and TE Team members. The report is organized into seven sections. *Section I: "Executive Summary*" which contains project information table, brief project description, evaluation ratings table, summary of findings and conclusions, key lessons learned and recommendations summary table. *Section II: "Introduction*" which contains evaluation purpose, scope of the evaluation, methodology and approach, data collection and analysis, ethics and limitations of evaluation; *Section III : "Project Description*" section that outlines detailed information about the project including the project start and duration of the project including milestones, development context, problems that the project sought to address: threats and barriers targeted, development objectives, project, expected results, summary of main project stakeholders and the ToC; The evaluation findings is divided into three parts which are project's design/ formulation, project implementation and project results and impacts. The *Section IV: "Project Design/Formulation*" presents information on the national priorities and country driven-ness, an analysis of results framework, assumptions and risks, lessons from other relevant project, planned stakeholder participation, linkages between project and other interventions and management arrangements. *Section V: "Project Implementation*" explains adaptive management, actual stakeholder participation and partnership arrangements, project finance and co-finance, monitoring and evaluation, the UNDP implementation/oversight and Implementing Partner execution, overall project implementation, coordination and operational issues, risk management, including social and environmental standards (safeguards), impact of COVID-19 on project implementation and beneficiaries and mitigation measures taken against COVID-19 and its

impact. *Section VI: " Project Results and Impacts*" which presents progress towards objective and expected outcomes, relevance, effectiveness, efficiency, overall project outcomes and sustainability of the project. Sustainability is assessed in terms of financial, environmental, social-political, institutional framework and governance and overall likelihood of sustainability. The section also includes country ownership, gender equity and women empowerment, cross-cutting issues, progress to impact and impact of COVID -19 on achievement. *Section VIII: Summary of Findings, Conclusions and Recommendations* as well as annexure of the TE report.

3.0 PROJECT DESCRIPTION

3.1 Project start and duration; including milestones

The Ethiopian NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (COMPOST) (PIMS 5541) is a five year project that started on the 1st of January 2017. Its Mid-term review was conducted in August, 2019, and its Terminal evaluation on October, 2021. The project is in its fifth year implementation and project closure expected to be 31st of March 2022. The project is implemented through the Ministry of Urban Development and Construction (MUDC) in Six cities; Adama, Bishoftu, Bahir Dar, Dire Dawa, Hawassa and Mekelle. The COMPOST project is designed to promote greater use of Integrated Solid Waste Management (ISWM) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns that will assist the Government of Ethiopia in achieving the objectives of its Growth and Transformation Plan (GTP II).

This will be achieved through four outcomes: i) strengthening the regulatory and legal framework and institutional coordination mechanisms to integrate ISWM and UGI within urban systems; ii) a developed market-based system with micro and small enterprises (MSEs) that are supported professionally to ensure financial sustainability of compost production and utilisation; iii) implementation of a Nationally Appropriate Mitigation Action (NAMA) that transforms the capacity of integrated urban systems to generate large emission reductions; iv) operationalized urban systems that integrate ISWM and UGI, with quantified GHG emission reductions, within a NAMA framework.

At the end of its lifetime, the COMPOST project was expected deliver direct annual emission reductions from UGI initiatives and ISWM equal to approximately 306,000 and 132,321 tCO2e, respectively. These will accrue from the annual generation of 45,489 tons of compost from 151,629 tons of household organic waste, and the reforestation of 33, 309 ha of degraded land by the end of the 5-year project lifetime. By assuming a lifetime of 20 years for compost facilities and managed landfills as well as for carbon sequestration and the generation of renewable biomass for thermal energy, the direct emission reductions generated by the project will be 8.33 MtCO2e, giving a GEF abatement cost of 0.80 US$/tCO2e. The number of direct jobs created through composting by the end of the 2021 was expected to be 744, of which at least 50% will be for women and youth. Additional direct jobs will be created by the UGI activities of the project, such as in nurseries, and digging and planting of trees. The project will produce co-benefits such as increased resilience of urban areas to drought and flooding hazards, and improved quality of life in urban areas.

The project interventions are in line with the Climate Resilient Green Economy (CRGE) strategy of Ethiopia. In addition to the CRGE, the project is also linked to other strategies developed to promote urban green development that cover both Integrated Solid Waste Management (ISWM)

and Urban Green Infrastructure (UGI) that support country focus towards developing a renaissance of its cities and contribute to building a green economy. The major policies and strategies related to the project are the (1) Climate Change Resilient Urban Green Development Strategy (CCRUGDS) developed to ensure that Ethiopian cities contribute towards national development and transformation and the (2) Climate Change Resilient Green Infrastructure Strategy which identifies areas that have a significant contribution to GHG emissions and which have a serious impact on climate change. It also contributes to SDGs mainly, SDG 11 Sustainable Cities and Communities; SDG 12 Responsible Consumption and Production and SDG 13 Climate Action. Partnership has been established with like-minded organizations from federal to city levels that are organized under steering committee and technical committees. Major partners of the project are the MUDC, Ministry of Finance (MoF), the six city administrations, Environment, Forest and Climate Change Commission (EFCCC), Ethiopia Standardization Agency, Micro and Small Enterprises and regional bureaus.

3.2 Development context: Environmental, Socio-economic, Institutional, and Policy factors relevant to the project objective and scope

The Project serves the development needs of Ethiopia, in line with the goals of its relevant donor organisations under the United Nations mandate. The Common Country Programme Document (CCPD) for 2016-2020 describes how the Federal Government of Ethiopia and the United Nations country management team developed a single United Nations Development Assistance Plan (UNDAP). This plan included the entire range of activities supported by UN organizations in Ethiopia, integrating the requirements of the UN Development Assistance Framework (UNDAF) with the country programme documents of UNDP, the United Nations Population Fund and the United Nations Office for Project Services. The UNDAP was particularly aligned with the country programme action plans signed by the Federal Government of the Ethiopia.

The Country programme document for Ethiopia (2016-2020) Pillar II on Climate change and resilience building pledges to support the Government's ambition to achieve rapid, inclusive and green growth economy where UNDP will provide upstream and downstream support for implementation of the CRGE Strategy targeting relevant line ministries, regional governments and local communities. Under UNDAF/Country Programme Outcome 2 is: By 2020 private-sector driven industrial and service sector growth is increasingly inclusive, sustainable, competitive and job-rich. UNDAF Outcome 5: By 2020 key Government institutions at federal and regional levels, including cities, are able better to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable resource management.

The MUDC and the six Municipalities have well developed plan to address waste management and urban and peri-urban forestry which have significant impact on GHG emission reduction, climate change adaptation and sustainable management of resources. The project supported in creating system in solid waste collection, the establishment of compost sheds, afforestation and reforestation of degraded lands and establishment of ISWM and UGI MRV system.

UNDAF Outcome 13: By 2020, national and subnational institutions apply evidence-based, results-oriented and equity-focused decision-making, policy formulation, programme design, monitoring, evaluation and reporting. The development of MRV system, various tools and standards for compost making and UGI enabled decision makers to plan, implement, monitor, verify and report in a scientific manner. Policy makers and urban planners benefited from the project because evidence is already generated for policy formulation.

UNDP Strategic Plan Output: Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste. Output 1.3 indicators 1.3.1: Number of new partnership mechanisms with funding for sustainable management solutions of natural resources, ecosystem services, chemicals and waste at national and/or subnational level. Each municipality has committed significant amount of financial and material provision (co-finance) to make the objective of the project real. The cities visited during the mission confirmed that the commitment shall continue even after the project life. The project provided concrete training in preparation of business plan to the MSEs and most of the MSEs acquired certificate of competence. The relevant GEF Strategic long-term Objective is to align GEF support with implementation of SDGs.

3.3 Problems that the project sought to address: Threats and barriers targeted.

Climate change is worsening sustainable green development of Ethiopian cities and towns. The National Policy and Strategy on Disaster Risk Management (2013) of the Government of Ethiopia (GoE) details how urban centres are exposed to increasing risks of floods and forest and bush fires due to climate change in the future. Stakeholder consultations with Ethiopian Government representatives indicates that removal of tree cover for urban expansion, charcoal production and agriculture is already a concern due to the resulting adverse impacts on the environment; urban heat islands are an expected outcome and are predicted to grow in size due to temperature increases. Similarly, increases in impervious surfaces associated with urbanization are reducing soil infiltration and increasing surface runoff during storms. Consequently, flooding is common in dense urban areas. Extreme flooding conditions have contributed to erosion and loss of fertile topsoil. These conditions are already noted in the IPCC's 5th Assessment Report 5.

Ethiopia is one of the fastest-growing economies in the world. Ethiopian cities and towns currently produce 60% of the country's GDP and house approximately 19.5% of Ethiopia's economically-active population. In spite of its importance, urban growth has largely been unplanned and uncoordinated, giving rise to a range of problems, including poor land-use planning related to UGI, inefficient waste management, limited opportunities for employment and a deteriorating urban environment. Ethiopia's urbanization growth rate reached 4.9% in 2013, leading to an increase in energy needs that has accelerated forest degradation to a rate as high as 5%/year in some regions due to the need for fuel wood and charcoal. The resulting deforestation has resulted in land degradation, landslides, flood risks and increased siltation in nearby water bodies. Rapid urbanization is adversely impacting the urban and peri-urban environment through the loss of arable soils, loss of riparian buffer zones to absorb runoff and reduce impacts to sensitive fresh water bodies, and higher risks of shortages of water supplies for households and agricultural lands.

Economy (CRGE) vision of the Government of Ethiopia (GoE), With the country's focus on efforts towards developing a renaissance of its cities to contribute to building a green economy, and in addition to the CRGE, Ethiopia has developed a number of strategies supporting urban green development that cover both Integrated Solid Waste Management (ISWM) and Urban Green Infrastructure (UGI). The link between SWM and UGI comes through their integration under the pillar for Environmental Sustainability under the GTP II of the Ministry of Urban Development and Housing.

Urbanization is generating a range of environmental impacts from the perspectives of both ISWM and UGI, the principal ones being: (i) Increasing volumes of solid waste generated in Ethiopian towns and cities: With municipal solid waste (MSW) collected and disposed of at landfills (semi-engineered or sanitary), this waste increases the generation of methane emissions; (ii) Increasing population in informal settlements, which do not necessarily benefit from the collection of MSW. The end-result is the dumping of waste in public spaces such as open areas and river banks, and deterioration of urban open green areas and river banks; and (iii) Increasing demand for primary energy in urban areas, predominantly in the form of non-renewable biomass, as well as the demand for timber for construction: Both are driving rapid forest degradation and deforestation in Ethiopia.

To support Ethiopia's CRGE vision for sustainable urban green growth and mitigate such and environmental impacts, Ethiopia must address significant capacity and financial gaps. Local governments within cities and towns lack the knowledge, capacity and financial resources necessary to implement significant greenhouse gas (GHG) emission reduction measures based on ISWM and UGI. In spite of a range of strategies and plans promoting urban greenery in Ethiopia, UGI activities are weakly enforced and given little importance. Dumping areas require cleaning to be able to support Ethiopia's UGI Standards on urban greenery development in open green spaces and along river banks. Moreover, almost all cities and towns in Ethiopia collect and dispose of only half of the solid waste generated, and have little or no disposal infrastructure in terms of either well-designed and operated landfill sites or disposal through recycling or incineration of organic waste. A baseline assessment has been carried out on the SWM systems in the 6 cities and towns of Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle targeted by the UNDP-implemented, GEF-financed COMPOST project, and it found that both the collection efficiency of MSW at the household level and the solid waste disposal rate at the landfill are, at most, 75%. With a low disposal rate (70%), these rates give an overall system efficiency of 52% of MSW being disposed of at landfills.

The major challenges along the MSW value chain in Ethiopian cities are:

1. *Generation*: MSW is not sorted at the household level in a systematic manner. With only an informal economy related to the collection of recyclable waste at the household level, MSW collection suffers from a lack of investment;
2. *Collection and transportation of waste*: primary waste collection can be characterised as crude in all cases, with door-to-door collection by micro and small enterprises (MSEs) with 2-wheel wheelbarrows, and MSE personnel employed under very poor conditions with little regard to occupational health and safety. The collection system has no transfer stations, and filled communal bins are then loaded by skip trucks owned by the municipality or city administration for dumping at a landfill. The major challenges regarding waste collection are: (1) cost recovery by either the MSEs or the city/town administration; and (2) a collection rate that is only approximately 75%;
3. *Disposal of waste*: in most cities and towns, the solid waste is dumped at open landfills that are not fenced, permitting access to scavengers who pick waste that have commercial value. A significant fraction of MSW is dumped in open public spaces such as green areas and along river banks. The current regulatory framework is virtually silent on waste collection and disposal enforcement mechanisms.
4. *Financial constraints*: there are several problems related to financing the SWM system, including: (1) due to socio-economic acceptability, not all cities and towns have recourse to the 'water bill' method, making cost recovery a problem; (2) in cases where the

contractual agreement for household waste collection is between the households and the MSEs, there is a higher rate of waste dumping, and weaker oversight by the city administration or municipality on the quality of waste collection and disposal; and (3) there is no cost recovery by the city administration/municipality for waste that is transported from communal bins to the landfill.

5. *Energy recovery* – there is no energy recovery at any of the waste disposal sites in the cities and towns considered in the baseline despite the fact that disposal sites such as in Adama and Hawassa were originally designed as sanitary landfills fitted with landfill gas capture equipment.

The major challenges in implementing and sustaining UGI in Ethiopian cities are:

1. *Enforcement of UGI designated areas*: the growth of urban centres places further pressure on UGI-designated areas to become human settlements. Personnel from urban local governments (ULGs) currently do not have the knowledge to enforce the proper use of UGI-designated areas. Over the past year, however, digitised cadastral maps with satellite imagery have now become available at the Land Registration Agency for use by municipalities as a tool for enforcing land uses within an urban area, notably the dedicated green areas that will be developed by this project. To overcome the challenges of enforcing UGI-designated areas, training municipal personnel on the use of these cadastral maps to enforce land uses is required;
2. *Insufficient number of technically qualified stakeholders involved in UGI:* most cities do not have a sufficient number of MSEs that are technically qualified to implement UGI projects involving nursery operations or the planting of trees and shrubbery. Meeting the demands for a 30% increase in UGI, as outlined in the GTP II, will require increased attention to the training of MSE personnel in nursery operations, plantation of reforested areas and maintenance of reforested areas;
3. *No cost recovery for UGI initiatives*: the financing of UGI initiatives is primarily from locally-collected revenues. With limited capacities to leverage other sources of financing, ULGs are unable to implement a broader set or scale of UGI initiatives that meet the targets of GTP II. Furthermore, ULGs generally do not have a full understanding of the true costs of implementing and maintaining UGI initiatives, and hence cannot articulate these costs to potential funding sources.

In response to the already present and expected impacts of climate change, Ethiopia's National Adaptation Programme of Action (NAPA) recommends increasing the use of sustainable biomass resources.16 The UNDP-implemented, GEF-financed COMPOST project directly addresses this recommendation by supporting the development of biomass-based compost market development. Through the use of compost, mainly by municipalities for reforestation activities, the project will simultaneously promote urban greenery development to enhance ecosystem services (including carbon sequestration) while increasing solid waste management to strengthen greenhouse gas mitigation and environmental protection. The project will support the transfer of technical expertise for developing a national standard for compost, as well as putting in place a quality assurance system.

3.4 Development and Immediate objectives of the project

The development objective of the NAMA COMPOST project was to promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure

(UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector.

The specific objectives of the terminal evaluation are:

i. To draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.
ii. To promotes accountability and transparency, and assesses the extent of project accomplishments.
iii. To identify intended and unintended project impacts, success stories, and areas of improvement during remaining project period and recommend possible scale up or replicating strategies.
iv. To assess feasibility of the Theory of Change (ToC) including the risks and assumptions.

3.5 Expected results

The expected project results based on the Project document were under as follows:

i. Outcome 1: Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems.
ii. Outcome 2: A market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilisation.
iii. Outcome 3: A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions.
iv. Outcome 4: Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework.

3.6 Summary of main Project stakeholders

Table 4: Summary of main Project stakeholders

S/NO.	Institutions/ Partners	Contributions to the project
1	Ministry of Urban Development and Construction (MUDC)	▪ The MUDC is the principal federal Government organ responsible for UGI and ISWM and to provide coordinated support to urban centres to make them capable of influencing their surroundings in implementing UGI & ISWM initiatives. ▪ Leading implementing body for the Government's national initiative on Green Infrastructure. ▪ It's Urban Planning, Sanitation and Beautification Bureau manages urban waste and greenery initiatives. ▪ Oversees land-cover and housing projects, and is active in supervising MSE activities. ▪ Coordinate with competent authorities such as Regional Bureaus and City Administrations to undertake management of UGI/IWSM elements during project implementation. ▪ Overall project coordination – for sharing project reports, involve stakeholders to contribute at different stage of the project implementation, and to collaborate with stakeholders. ▪ Ensured the social and environmental safeguards of the project are implemented in the intervention cities.

2	Ministry of Finance (MoF)	▪ MoF oversees the Climate Resilient Green Economy (CRGE) Facility established in order to channel international financing for the implementation of Ethiopia's Green Economy Strategy. ▪ The project worked with the Ministry to better integrate ISWM and SWM into the CRGE Strategy. ▪ Overseeing project budget utilization, integrating the MUDC MRV mechanism with that of the CRGE facility through MEFCC. ▪ Involved in the project phase-out period to assure sustainability of the project with MUDC's day-to-day operations.
3	Ministry of Environment, Forest and Climate Change Commission (EFCCC)	▪ MEFCCC houses the GEF Operational Focal Point, the UNFCCC Focal Point and the REDD+ Focal Point. MEFCC will provide technical guidance on how to support solid waste management based on its involvement in the SWM Proclamation and urban greenery. ▪ The Ministry's Forest Department experts will support the reforestation efforts to be undertaken in each of the 6 cities. ▪ Linking the project MRV mechanism with the national MRV system that is expected to be designed during the project lifetime and in the design and operationalization of the national voluntary carbon offset scheme.
4	Ministry of Agriculture and Natural Resources (MoANR)	▪ The Ministry of Agriculture will provide technical guidance on sustainable urban agriculture and composting. The project will collaborate with the Ministry's Agricultural Transformation Agency during composting quality testing. ▪ Developing work owner/process for urban agriculture, investigating the soil condition of the urban area where horticultural products could be produced, promoting and creating market opportunities to sell the products; and providing extension services on composting. ▪ Linking with the project under the Soil Fertility Department for wider dissemination of quality compost into urban and peri-urban agriculture. ▪ The MoANR will also be involved in establishing field trials on the use of compost in urban agriculture, and in the dissemination of the results to farmers. Its agricultural extension services will act as an outlet for marketing of compost in urban agriculture.
5	Horn of Africa Regional Environment Centre (HoAREC)	▪ HoAREC is a network of members and partners consisting of environmental CBOs, NGOs and higher learning institutes from six countries in the Horn of Africa. ▪ Linking the project to its regional members and partners for sharing of knowledge and lessons learned on UGI/ISWMS. ▪ HoAREC is assisting Addis Ababa City Administration in an initiative to rehabilitate the Repi landfill into a recreational area with the support of the City of New York ▪ Key role in UGI/ISWM development programmes and will be involved in knowledge-sharing, especially relating to the rehabilitation of open waste sites
6	Technical Vocational	▪ TVETs will be supported by Government and donor financing through training by building on UNDP's Entrepreneurship

	Educational Training institutions (TVETs)	Programme to help MSEs establish businesses with the supply and demand opportunities associated with compost, which will enhance the entrepreneurship capacity of SMEs. ▪ Certifying SMEs working in the area of compost production. ▪ Establishment of partnership agreement with MUDC through its project coordination office to organize and conduct training for SMEs in UGI/ISWM.
7	Ethiopian Standards Agency (ESA)	▪ The ESA is the Government organization responsible for developing standards for different products and services. ▪ Prioritization of the development of standards for bio-fertilizers and compost. ▪ Development of standards bio-fertilizers and compost generated from MSW. ▪ It will also be involved in providing technical support, training and advisory services and assisting the project in the implementation of the standard for compost.
8	Wondo Genet College of Forestry and Natural Resource of Hawassa University	▪ The College of Forestry and Natural Resource is carrying out a mapping of the most suitable plant species for UGI projects in the agro-ecological zones of Ethiopia. ▪ The COMPOST project will collaborate with the College to identify the most suitable plant species that will be used for UGI development in the six cities and towns. ▪ Support the development of manuals for tree species for cities.
9	Micro-finance institutions (MFIs)	▪ MFI are delivering financial services in Ethiopia with particular emphasis on rural and urban poor households, promotion of both credit and savings products, and a strong focus on sustainability. ▪ Providing financial support to MSEs carrying out urban solid waste collection at the household level. ▪ Lending to MSEs engaged in composting if the activity is supported by a sound financial and business model as is the case with the COMPOST project.
10	Association of Micro-Finance Institutions (AEMFI)	▪ AEMFI advances best practices both among its member MFIs and for the industry as a whole and serves as both the voice and the support system for the industry. ▪ The Association serves as a forum through which MFIs can exchange information; enhance capacity through the provision of training, capacity building and funding negotiations, and strengthen the sector by providing research, advocacy, promotion and engagement to positively influence policies and practices. ▪ Supporting the project by communicating the results of the project, to its members that will help to increase the visibility of the project, as well as sharing of lessons learned that will be important for replication.
11	Regional Bureaus for Urban Development	▪ Regional Bureaus for Urban Development and Land Use are the lead implementing bodies for the Government at the regional level with regard to urban planning, sanitation, beautification and land use. ▪ The Regional Bureaus have direct oversight of the municipal ISWM and UGI activities in terms of budgetary provisions, and monitoring and evaluation of performance.

		▪ Implementation of regional activities under the coordination of Local Project Coordinators and technical input from the municipal Technical Committees will be carried out under the oversight of the Regional Bureaus. ▪ Cascading developed standards, manuals, maps, guideline in the respective cities and towns.
12	City/Town Administration	▪ The 6 cities and towns are the main beneficiaries of the COMPOST project. The municipalities of Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle are implementing ISWM and UGI initiatives. ▪ Recruitment of MSEs to implement streamlined waste collection services, rearing of seedlings in nursery operations, and the plantation of seedlings for urban green shrubbery and trees in public areas. ▪ Integrating project activities with regional universities to undertake research and development, capacity building and information sharing. These universities are ;Adama University for the City of Adama and Bishoftu town; Wondogenet University for the City of Hawassa; Haramaya University for the City of Dire Dawa; Mekelle University for Mekelle City and Bahir Dar University for Bahir Dar City. ▪ Selecting and providing incentives for source sorting of household waste; providing and facilitating the provision of licenses to MSEs engaged in composting and UGI activities and awareness creation at household level regarding ISWM
13	UNDP Country Office (UNDP CO)	▪ Monitor the implementation of the COMPOST project, review progress in the realization of the project outputs, and ensure the proper use of UNDP/GEF funds and working in close cooperation with MUDC ▪ Providing support services to the project such as procurement, contracting of service providers, human resources management and financial services - in accordance with the relevant UNDP Rules, Regulations, Policies and Procedures and Results-Based Management (RBM) guidelines. ▪ Technical advice, facilitating change processes, support to mechanisms for advocacy, networking and partnership building including intermediation for information, expertise and funds, and knowledge development and dissemination. ▪ Contribute directly to the implementation of several outputs through the provision of parallel financing.

Source: NAMA COMPACT Project Document

3.7 Theory of Change

The ToC was assessed during the MTR, and this TE reiterates its assessment for further explanation on how the project contributed to the ToC for the UNDP Ethiopia Country programme outcomes and intended long-term environmental impacts of the project as shown in (Figure 1). The TE Team considers that the ProDoc is of an excellent quality, with an appropriate description of the context and development challenges of SWM and implementation of sustainable UGI faced in Ethiopia cities. The project long-term impact is the reduction of GHG

emissions and increased sustainable development benefits. This impact will be realized after achievement of the project development objective which is to promote significantly greater use of ISMW and UGI approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector.

It is envisaged from the ProDoc that, the attainment of the project impact is depended on the achievement of the four outcomes which include: (i) Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems, (ii) A market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilization, (iii) A NAMA is designed and implemented to catalyze transformation of integrated urban systems to generate large emission reductions and (iv) Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework.

The achievement of the project outcomes is a function of production of 19 outputs as stated in the project logical/result framework (Annex F) by performance of project activities using the available inputs. The production of project results (impact, intended long term and intermediate outcomes and outputs) is based on critical assumptions and key drivers that must exist in order to realize those results. The TE Team conducted an assessment of the impact pathway the project ToC in terms of assumptions and key drivers that underpin the process of transforming outputs to intermediate and intended long term outcomes to final impact. The assumptions are the external factors that are expected to contribute to the realization of the intended impact and which are beyond the control of the project management unit. The drivers are the external factors that are expected to contribute to the realization of the intended impact and which can be influenced by the project management unit.

The findings from the desk review indicate that, there is causal pathways on transition process towards project long-term impact on assumptions and drivers area are on proper way to be met. This is attributed to the coordination of work between the PMU, UNDP, IP and the steering and technical committee. Therefore the ToC (Figure 1) was well designed and if all assumptions and drivers are met along the pathway, then the intended project impact will be realized.

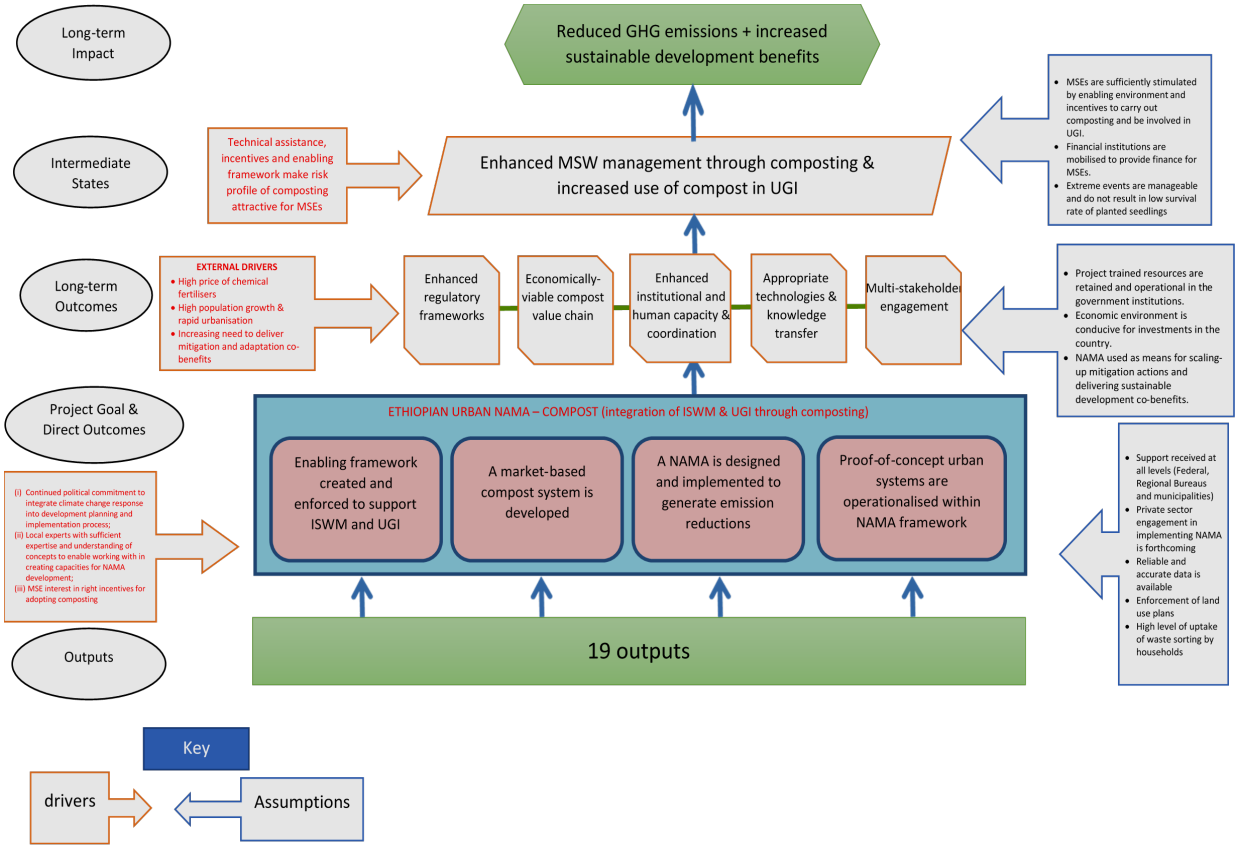

Figure 1: Theory of Change

4.0 FINDINGS

4.1 PROJECT DESIGN/FORMULATION

4.1.1 National priorities and Country driven-ness

The overall project objective is to promote significantly greater use of ISWM and UGI approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector. This is in line with the The Ethiopian Climate Resilient Green Economy Strategy (CRGE) that has recognized the need for creating modern and clean cities. The strategy has projected waste production to increase by 75% by 2030 from the baseline 2010. The driving force for this increase is the rapid urban population growth and associated infrastructure in the urban and peri-urban areas. The strategy recommended that, rapid growth of cities will require large scale investment in urban infrastructure, including the development of management systems for solid and liquid waste, two of the largest sources of emissions in this sector. The proposed strategy is a) Use of landfill gas management technologies to reduce emissions from solid waste, and b) Reduction of methane production from liquid waste.

The project is also addressing the Ethiopia Growth and Transformation Plan-2 (GTP II) that has ambitious plan of producing organic compost by farming community. However, the technology so far available is not conducive to produce and transport the compost to the farms. The project is well aligned with GTP II ambition which supplies useful information to improve composting method in farming community. On the other hand, the organized MSEs can supply significant amount of compost to farming community once environmental and social safeguard is addressed. Recent initiatives by the Prime Minister of Federal Republic of Ethiopia Dr. Abiy Ahmed's of

mobilizing the Ethiopian people children, youth, adults and elders to plant 4 billion seedlings and the mobilization demonstrated a remarkable milestone for future actions on how to combat climate change related impacts. On 29 July 2019, more than 350 million seedlings were planted in urban and rural lands. Prior to 29 July 2019 and on the same day various panel discussions on radios, TVs and other medias were conducted; and various journalists covered stories on forestry and its contribution to climate change and social and economic development of the country.

The National priorities and Country driven-ness is addressed by the project. The areas that demonstrate this include: the development of capacity building programme in conjunction with the Entrepreneur Development Centre (EDC) to enhance the occupational health and safety conditions of MSEs, establishing a financing mechanism to support the establishment of new MSEs and to support the skills and technological enhancement of existing MSEs in the ISWM-UGI value chain, generate market outlets for compost by the municipal composting plants through long-term contracts with public municipalities, city/town administrations, and private (landscapers, nurseries, farmers) institutions so as to support urban agriculture and peri-urban forestry on a large-scale, market outlets for the non-organic recycled waste processed by the municipal sorting plant through long-term contracts with recycling firms, integrate SWM and UGI Standards in curriculum in education and establish a voluntary carbon offset scheme to support urban and peri-urban reforestation.

4.1.2 Analysis of Results Framework: Project logic and strategy, indicators

An analysis of the project logic, strategy and indicators was conducted by the TE Team in the project results framework. The results showed that, the project activities, outputs, indicators and objectives are clear in the results framework. The project outputs and indicators are well articulated and linked with the ISWM and UGI approaches addressing the broader city development issues and international environmental challenges SWM and UGI and complex problems of job creation in the country. There is coherence between indicators, baselines and targets for the outcomes. All indicators are SMART that is specific, measurable attainable realistic and time bound. There is a clear link between the problem analysis and the proposed solutions. The activities are well described and are relevant enough to contribute to the objective of the project.

The results framework was organized around four general hypotheses that, it will be possible to promote significantly greater use of ISWM and UGI approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector in the six cities if: i) Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems are established, ii) a market-based system is developed, and participating micro and small enterprises are supported professionally to ensure financial sustainability of compost production and utilisation is developed, iii) a NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions, and operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework are in place.

4.1.3 Assumptions and Risks

There were 14 key assumptions identified during project formulation and documented in the project document. All assumptions in the project logical/result framework are clear, appropriate and well-articulated in the project document. The assumptions were relevant to the achievement of the project. However, new types of risk were not adequately deliberated and articulated in the project document. These include COVID-19 pandemic and inflation and its implication on the implementation of project, potential political unrest of Hawassa and Sidama region, security situation that challenged effective and timely project implementation, the rising cost of project materials, potential changes in the cities administration involving high officials' turnover where trained and experienced officials and experts who knew the project left office after serving for a few months or weeks. This labour turnover became common throughout the project period and this brought challenges in the delivery of some project activities.

Other risks identified during project implementation include; securing land for green areas, and changing communities' attitudes on sorting solid wastes. These required decision making from the project steering committee to mitigate them. The findings shows that, Environmental and Social Impact assessment (ESIA) was conducted in January 2021 to respond to the risks associated with the project, and come up with risk mitigation measures, but the ESIA was done late according to the project life cycle. It could have been better if the exercise was to conduct conducted during the time of mid-term review so that corrective action can be initiated in time.

4.1.4 Planned stakeholder Participation

The engagement with project stakeholders such as government, civil society, NGOs, indigenous peoples, private sector, among others, was done throughout the project implementation from planning to implementation during the reporting period. For instance, there is evidence that the Annual Work Plan (AWP) for 2020 was planned through full participation from local level to Ministry level. Then final work plan was presented to the Project Steering Committee and anonymously endorsed by members. The AWP was then implemented by the six project cities through coordinating experts from different departments of the municipalities. This was carried by (i) Mobilizing community participation in tree plantation on project urban and peri-urban greenery areas, (ii) involving the private sector in taking responsibility to manage greenery areas as social responsibility and (iii) engaging MSEs along the value chain of waste management and urban greenery, and (iv) In addition to the grass root level involvement, different organizations participated at high level as well. The carbon off set mechanism designed by the project and registration for NAMA in UNFCCC is supported by Environment, Forest and Climate Change Commission of Ethiopia. Research institutions and universities such as the Bishoftu Agricultural Research Institute, Hawassa University, Haromya University, Dire Dawa University and Adama University are contributing in conducting laboratorial tests on compost and developing guidelines.

4.1.5 Linkages between the Project and other Interventions within the Sector

The findings from the KII revealed that, the project made linkages with other projects to rein force interventions, and value and avoid duplication. For instance, NAMA project worked with other projects implemented by the World Bank, GIZ and UN-Habitat. World Bank financed the Second Urban Local Government Development Programme (ULGDP) II during designing of COMPOST. GIZ had significant experience in implementing waste and urban greenery activities throughout Ethiopia. It has established a set of Standards for Urban Greenery and for Solid

Waste Management. The project adopted implementation of two standards in the 6 target cities and towns from GIZ.

GIZ Nature Project supplied donkey carts and safety materials and awareness creation on SWM while UN-Habitat started working on public space greenery and furnished green areas with facilities for accessing water, electricity and furnishing it with chairs. This project supported Urban Local Government (ULGs) to implement activities such as roads, water supply, sanitation, solid waste and greenery. The project built on Urban Productive Safety Net Programme (UPSNP) and provides examples of opportunities for GHG emission reductions and compost market growth for other cities and towns to replicate. The city benefited from different training provided on solid waste management by other projects. This lead to creation of awareness for stakeholders and learning from that experience was essential for effective implementation of project activities. The beneficiaries started building small warehouse for compost production with support from the Climate Resilience Green Economy (CRGE) Facility budget under-construction of compost plant. Therefore, linkages with other project during implementation were important for leveraging and creating synergy.

4.1.6 Project Management Arrangements

The project management arrangement for the project was outlined in the ProDoc. The project was implemented following UNDP's National Implementation Modality (NIM)) between UNDP Ethiopia Country Office and the Government of Ethiopia, and the Country Programme Action Plan (CPAP). The Implementing Partner (IP) for this project is the MUDC. The IP is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources. A close examination on the effectiveness of the management arrangement from the KII indicated that, the management arrangements of implementing partner were effective. The MUDC supported administrative, financial and human resource support to the project. Similarly, the management arrangements of UNDP provided good support to Project Steering Committee (PSC) and Project Management Unit (PMU) towards project objectives and in oversight, monitoring and evaluation for improved performance. The Project Management Structure is shown in Figure 2 below.

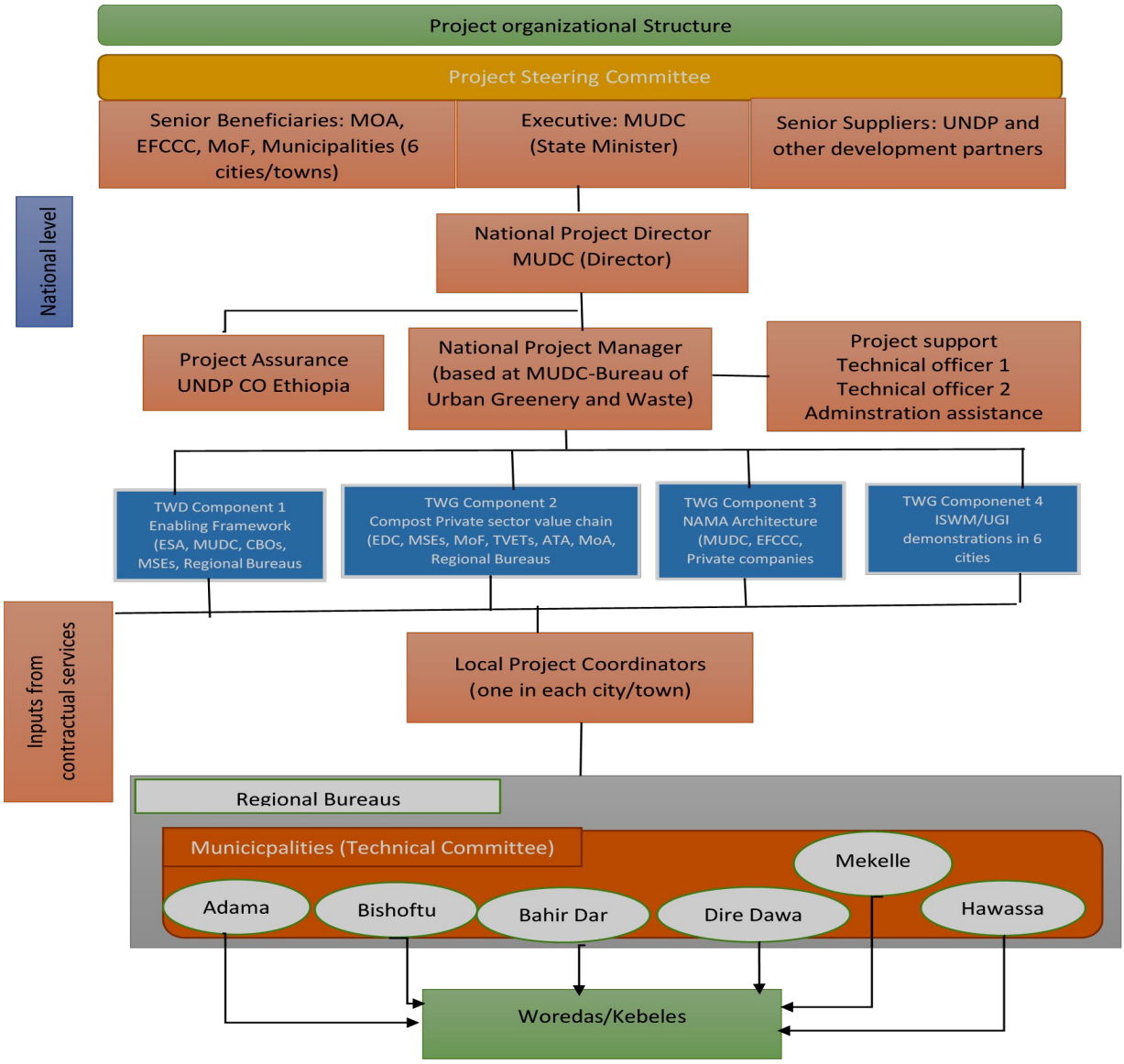

Figure 2: The Project Management Structure

Under the above project management structure, the PSC is responsible for making decisions by consensus, under the guidance of the Project Manager, including recommendations for UNDP, IP approval of project plans and revisions. The PSC is comprised of the representatives of the following institutions: the State Minister of MUDC, EFCCC, the MoF, the MoANR, selected representatives from Regional Bureaus, one local project coordinator from each city, a representative of the private sector, a representative of MSEs and the Project Manager. The Project Manager is responsible for running the project on a day-to-day basis on behalf of the IP.

The Project Coordination Unit (PCU) is in charge of overall project administration and coordination with project sites and relevant organizations, under the overall guidance of the PSC. There are two Technical Officers who work under the Project Manager based in MUDC Urban Climate Resilient Bureau, coordinating activities with partners in UGI and ISWM sectors. Since the PSC and the PMU are based at the federal level while several outputs and activities of the

COMPOST project took place at the regional level, Local Project Coordinators (LPC) were used to make the liaison between the city administrations and the PMU/PSC. Each city was designated an LPC and the position was be part of the in-kind contribution provided by each city. The LPC provided oversight role in the implementation of the COMPOST project at the city level. Project assurance and oversight is provided by the UNDP CO and by the UNDP-GEF Regional Office.

4.2 PROJECT IMPLEMENTATION

4.2.1Adaptive Management

The project employed adaptive management at the workplan level. Examples of adaptive management the project has exercised include; Dire Dawa shed that was built using wood for roofing but after monitoring the structure, the municipality recommended to change it to a metal structure; inclusion of wind break structure on Mikelle's shed; the greenery areas of the cities were shifted to un settled areas to avoid resettlement related problems; cash co-financing was introduced following cost inflation in shed construction; changing construction of 6 sheds instead of 2 was agreed after understanding the problem related to transportation of waste and procurement of compost turner was decided after understanding the challenge with labour based composting.

The PSC made critical strategic decisions and amendments based on new and emerging needs. For instance, in the procurement of compost turner and transport facilities, compost fleece, and digital thermometers and allocated budget to pay salaries for MSEs members as a way of cushioning them due to COVID-19 lockdown, this helped them to continue working on SWM activities. The construction of compost sheds were emerging developments of the project in which appropriate management decisions were made. Such changes were necessary for addressing the emerging needs of communities, MSEs, and the municipality although they were not in the original project document but they helped contributed to the achievements of project objectives. At the city level, project activities were planned and implemented depending on the context and situation. The technical committee at city level discussed, and when required, decisions were made with flexibility.

4.2.2 Actual Stakeholder participation and Partnership Arrangements

In the design phase, the ProDoc described substantial consultation with stakeholders at national, regional, woredas and at kebeles level. This inclusive approach continued during project implementation, with partnerships that have been developed between the project and regional, woredas and kebeles government agencies and with city administration and MSEs at the local level stages of project implementation. All cities, MoF, EFCCC, and ESA are involved during AWP development and approval. These are major stakeholders that help in avoiding duplication of efforts. MSEs and private sector such as Dream Light of Bahir Dar are involved at city level technical working group during planning and reporting. Private sector involvement during implementation is ensured. For example COBA, EKT, and other private sectors have market linkages with MSEs.

The project has Steering and Technical Committees who oversee the implementation of the project. These committees are mostly drawn from the government institutions which represent sectors related to ISWM and UGI. However, others stakeholders such as private sectors are

crucial to make implementation successful. For example, without the role of private sector, non-degradable plastic recycling could not materialise. Therefore, for project sustainability to be realized, project should continuously engage wider stakeholders especially MSEs. Participation of stakeholders included involvement of officials in strategic and decision-making activities. The project had a national level Steering Committee composed of the six project cities including Hawassa, MUDC, EFCCC, Ministry of Finance, regional urban development bureaus/ city manager for Dire Dawa/ and others. They actively participated in key decision-making activities like budget allocation and approval and providing strategic direction on key project issues.

The SWM and UGI actors participated in the project. In Hawasa municipality for instance, SWM actors were; i) 52 associations having a total of 1300 members (90%) women: These are fixed term employees of the city municipality, ii) 13 MSEs (with only 7 active) with 1700 (540 female) members have been working in SWM, iii) more than 1200 (52% female) employees have been actively working by themselves at individual level. Because wastes are now resources, they sort solid waste and sell in the market. The UGI actors included: 4 MSEs (5-12 persons/ MSE) 47 members were permanent employees. These groups engaged in seedling. Additional, 1600 temporary employees employed once in a year are engaged in ditching and planting; and 158 MSEs with 7-10 members each oversaw regular follow up and cultivating. Another 37 members were security personnel. At city level, the steering committee (SC) was in charge of accomplished specific project activities and making decisions on outstanding issues. For example, when allocating and identifying green areas and solid waste transfer stations, SC plaid a key role. Participation and coordination among main sector offices was evident. For example, Environmental Protection Office produced seeds, Municipality Office managed and controlled planting seedling; MSE engaged in creating employment opportunities

When Ethiopian's Prime Minister Dr. Abiy Ahmed mobilized the country for his green legacy mobilization about greening Ethiopia, almost all public and private sectors in Hawassa took part in tree planting and cleaning. Before that, only a few sectors used to engage in tree planting and environmental protection activities. But the green legacy campaign engaged all stakeholders, they participated by did the digging; planting, nurturing of green plants and finally handed over prepared green sites to communities and the city administration.

In Hawassa city, the Mayor acted as a national steering committee member. The Mayor took part in bi-annual steering committee meetings where MUDC and UNDP have been facilitating project activities. Main stakeholders for instance from Bishoftu city on land management, urban development and construction, sanitation and beautification, standardization, and others, planned and actively implemented the project. To implement specific tasks and activities, the municipality signed contracts with different stakeholders, including MSEs engaged in solid waste management and urban green infrastructure.

4.2.3 Project Finance and Co-finance

The implementation of NAMA project required huge financial resources. The project was co-financed by different organizations both in cash and in-kind. The city administration allocated budget and other resources by providing human resources, offices and office supplies, vehicles, and land for sheds' construction, allocating land for greenery, staff time, office space, equipment and compost production and financing project activities. The project has managed and utilized up to 98% of the total budget and remaining with only a balance of US$ 52,000. These funds will be used for the remaining project duration up to 31st March, 2022.

The budgeted co-financing at the formulation stage totaled the amount of USD 41M; which was confirmed by letters presented in the project document. As shown in Table 5 below, this amount was effectively utilized as planned as at Sept 2021; representing a ratio of 4:1 over the amount funded by UNDP/GEF, and it was rated as satisfactory.

Table 5: Project Finance and Co-financing of the project

Partner/Implementer	**Commitments (US$)**	**Actual (US$)**
National government (MUDC, ESA, MEFCC)	23,438,164.00	11,939,538.29
Adama City Administration	1,639,175.00	5,308,571.43
Bahir Dar City Administration	3,202,803.00	4,739,692.86
Bishoftu City Administration	3,078,083.00	4,212,214.28
Dire Dawa City Administration	2,824,911.00	5,319,285.72
Hawassa City Administration	2,799,884.00	4,672,142.86
Mekelle City Administration	3,878,849.00	4,822,678.58
Civil Societies	297,019.00	500,000.00
Private Sector	200,000.00	25,000.00
Total co-financing	**41,358,888.00**	**41,539,124.02**

The main co-financing contributor for this project was supposed to be the cities with a budget of USD 17M. This sum was to be the funding for NAMA project activities and was confirmed by a commitment letter from respective government offices stating that in exchange of the funding, partners are committed to contribute their share either in funding or in-kind. As indicated in the table 5 above, the six cities as the implementing arms of NAMA project were able to go forward in contributing 60% more than their initial commitment, totaling their total contribution of US$ 29M. The funding from the national government did not materialize as planned. Due to budgetary constraints during the implementation period of the project, COVID-19 induced economic challenges and the national government partners were only able to contribute the sum of US$ 11.9M. Regarding the co-financing from both the cities and national government, their co-financing commitments were fulfilled mostly in-kind contributions in terms of staff time, allocating land for compost plan, construction of fence, landscape development and procurement of different items including tractors.

4.2.4 Monitoring and Evaluation: Design at entry, implementation and overall assessment

The ProDoc emphasized the importance of Results-Based Management (RBM), and included with a results framework for measurement of project indicators on annual, mid-term and end of project timeline. Reporting of the project progress has occurred in its quarterly and annual reports which are prepared by the Project Manager and shared with the PSC. As part of the Monitoring and evaluation (M&E) plan, independent external evaluators have been engaged for both project mid-term and terminal evaluations. The UNDP CO has conducted periodic field visits to assess project progress as have members of the PMU. The financial allocation of GEF funds to Project Management in the GEF component of the budget was US$ 317,482. The

amount earmarked for M&E was not identified, and this should be clarified. The MTR team feels that these resources appear to have been managed and allocated effectively. The overall assessment of the monitoring and evaluation shows that, pprocedures have been followed correctly. The MTE recommended that, a results-based monitoring and evaluation was necessary for reporting on results as opposed to activities. A closed analysis of project progress report indicates that, that recommendation has been implemented. Moreover, project Environmental and Social Impact Assessment was conducted during implementation. It recommended proper implement environmental monitoring management systems and maximum safety and health procedures in compost sheds during collection, segregation and process of compost. The M&E Design, M&E Implementation and the Overall quality of M&E was assessed on a six- point scale as presented in the Table 6 below using established outcome ratings for Ratings for Monitoring and Evaluation (ANNEX K-5).

Table 6: Ratings for Monitoring and Evaluation

S/NO	Monitoring and Evaluation	**Rating**
1	M&E Design	6= Highly Satisfactory (HS)
2	M&E Implementation	5= Satisfactory (S)
3	Overall quality of M&E	5= Satisfactory (S)

4.2.5 UNDP implementation/Oversight and Implementing Partner execution, Overall project implementation/execution, coordination, and operational issues.

The current PMU based at MUDC has done a thorough and commendable job of project management and administration since their recruitment, with regular monitoring of the work of partner organizations and other project support provided by the UNDP CO. The implementing partners (MUDC and the six cities) are committed to respond to the needs of the city dwellers in the management of waste as well as increasing the greenery to make the cities habitable. The waste management challenges in the urban centres is well recognised by the city dwellers and each household is committing its contribution despite the fact the amount of money is not sufficient.

The implementing partner assigned dedicated staff with office and equipment to make a follow-up of day-to-day activities in both ISWM and UGI. The implementing partner committed significant amount of financial resources to make the project achieve its outcomes. The coordination of business operations between different actors was done by establishment of steering and technical committees in order to steer and guide the implementation. The NAMA project is well connected with federal CRGE facility owing to its contribution to GHG emission reduction towards implementation of nationally determined contributions. The UNDP implementation, oversight and IP execution, overall project implementation, coordination, and operational issues was assessed on a six- point scale as presented in the Table 7 below using established outcome ratings for Ratings for Implementation/ Oversight & Execution (ANNEX K-2).

Table 7: Ratings for Implementation/ Oversight & Execution

S/NO	UNDP Ratings for Implementation/ Oversight & Execution	Rating
1	Quality UNDP implementation/Oversight	6= Highly Satisfactory (HS)
2	Quality of Implementing Partner execution	6= Satisfactory (S)
3	Overall project implementation/Oversight and Execution	6= Satisfactory (S)

4.2.6 Risk Management, including Social and Environmental Standards

The ProDoc provided a risk assessment guide which looked at risks and barriers to project implementation and laid down the basis for risk identification and mitigation measures. The project faced some risks and barriers during implementation. For instance in Hawassa, the city administration and sector offices commitment to accomplish planned project activities were challenged by political unrest and the question of a regional administrative state formation in Sidama State. Both Hawassa city administration and Sidama Zone were preoccupied by this overwhelming political agenda of an independent Sidama regional state formation.

There were frequent officials staff turn over from both Hawassa city and Sidama region sector offices which hampered implementation of activities. A lot of effort was required to induct and bring to speed the new officials who came about the project. There is high urban population growth in Hawassa. There was a high demand for land for residential, commercial and mixed uses by different groups of people and institutions. Allocating space for green sites and parks was challenging because the Officials' commitment and decision on land allocation had mixed reactions with resistant and the other times welcoming. However, to overcome this barrier, title deeds were issued for 4,385 ha of land in the cities. Increasing prices of construction materials and other project items was challenging due to inflation with costs tripled on some occasions.

In this project, the risks were monitored quarterly by the Project Manager and reported with a record progress in the UNDP ATLAS risk log, and they were reported as critical when the impact and probability are high. Risk reporting is part of Quarterly Progress Reports; however, the analysis of project documents shows that, there is little evidence of risk identification and reporting covered in 2018 and 2019 risk management and 2021 ESIA. The recommendations from the MTE that, there was need to undertake a full ESIA for this project was implemented with a ESIA being done in January, 2021.

The findings from document review show that, there have been some risk identification and mitigation measures despite little risk reporting. For instance, sheds raised by the cities have leachate collection ponds but were constructed to avoid social risks. The project has used different strategies to minimize potential negative impacts during implementation such as intervening in areas where there are settlements to avoid displacement of people, construct the sheds within landfills for which EIA is already conducted to avoid environmental impact of composting, provide OHS trainings and materials to MSEs engaged in economic activities along the value chain of waste management and introduce waste segregation practices, undertake laboratory check on compost as well as use it only for plant nursery and urban greenery to avoid health impact. In addition, ESIA report indicated that mixed transportation of organic and non-organic wastes were considered as social risk where the same report recommended cities to

establish separate transportation services by scaling up Adama's best practices. Following that, the project provided cities with tractors and trailers for separate transportation of wastes. Moreover, income of recycling process by MSEs was identified as risk of sustainability but this was mitigated by procuring balling machines to reduce transportation costs.

4.2.7 Impact of COVID-19 on Implementation, beneficiaries and Achievements

The COVID-19 pandemic negatively affected MSEs and the livelihoods of the beneficiaries. The sales stopped, the compost was closed and there was no market for the MSEs, a situation which made it difficult for them to continue with operations. They were disintegrated because they could not pay salaries for their staff working on the project which affected implementation of project activities. When COVID-19 lockdown were enforced, the project were postponed some project activities like training MSEs and staff. COVID-19 negatively affected the plastic waste market leading to reduced MSEs' income. There was no market for collected, crushed, and packed plastic wastes that led to production of wastes scattered at different places during lockdown. The impacts of COVID-19 were seen where i) MSEs engaged in recycling and composting lost market and therefore their livelihood was affected and ii) because of loss of market, MSEs stopped collecting recyclable wastes and therefore the cities became very dirty and iii) a separate observation from the respondents revealed that, some individuals used this time of COVID to manage their small city gardens by planting vegetables.

4.2.8 Mitigation measures taken against COVID-19 and its impact.

To mitigate impact of COVID-19 pandemic on MSEs and their staff, the Project Steering Committee requested US$ 150,000 from UNDP as a risk-mitigating strategy to pay MSEs their salaries in order to make them survive and ensure that project activities do not stop. Reprogramming of some money from UNDP was done to support MSE's so that they can buy and sell using the market-based approach. Before the NAMA project, it was the municipalities that were responsible for collecting and selling wastes, but when the project came , beneficiaries took over the collection which became an advantage to the cities. When COVID-19 lockdown were enforced, the project postponed some project activities like training MSEs and staff; they changed their focus and started growing seedlings. Therefore, COVID 19 brought impact on the project because i) the MSEs generated income to support their livelihood but was affected by loss of market due to COVID 19 and ii) MSEs stopped collecting recyclable waste due to lack of market, and this made the cities to become dirty.

The outbreak of the COVID-19 pandemic had some impact on project performance. The project has tried to cope up with the challenges by reprogramming activities which cannot be undertaken for instance workshops and trainings; providing personal protective materials and subsidizing MSEs whose livelihood is affected by the pandemic and advising cities on how to handle the situation. As a result of repeated awareness raising programs and by providing seedling for free, community of the six cities are planting trees in their compound and surrounding areas. Community participation during tree plantation is increasing from time to time as informed by the municipality. Waste dumping sites have been rehabilitated, degraded areas have been restored and peri-urban areas reforested. As a result greenery coverage of the cities is improving form time to time. In cities like Adama and Dire Dawa, their exposure for flooding has reduced significantly due to the terracing constructed for the seedlings and improved management of the land. The TE team has also observed mass mobilization on cleaning of streets, riverbeds, water canals and illegal waste dumping areas contributed to promoting project implementation towards achievement of its outcomes.

4.3 Project Results and Impacts

4.3.1 Progress towards Objectives and Expected Outcomes

The progress towards achievement of overall project objective and expected outcomes was evaluated according to the UNDP-supported GEF-financed projects evaluation guidelines. The TE assessed the extent to which expected outcomes were achieved against set indicators, and how expected outputs were delivered by updating and providing comments on the results framework of the project. Table 8 below presents an analysis of the progress towards objectives and output achievements based on indicated developed in the ProDoc. The indicators were assessed using the following color coding below:

Green = Achieved	Yellow= On way to be achieved	Red= Not on way to achievement

Table 8: Progress towards achievement of project objectives, expected outcomes and targets

Indicators	End of project Targets	Results	Reference & MOV	TE level of achievements	Rating	Comments
***PROJECT OBJECTIVE**: To promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector*						
Indicator 1: Direct project CO2 emission reductions from the range of interventions proposed by the project, kilo tonnes CO2	438 (footnote: This would include GHG emission reductions accumulated from avoided methane production and landfills through diversion of MSW to produce compost (132,321 tonnes CO2e/yr) and urban forestry and generation of renewable biomass for fuel wood use (306,000 tonnes CO2e/yr).	The project has rehabilitated 31.871.96 ha of urban and peri-urban degraded area which is 96% of its target and the amount of compost produced so far in the last five years is 109,220.7 tonnes which is 90% of the target. Accordingly the estimated emission reduction is 413 Kilo-tones of CO2 equivalent (119 Kilo-tone from compost and 294 Kilo-tone from UGI).	ProDoc Project Tracking tool MOV/MRV Baseline MOV/MRV Report Annual Reports MTR	Progress stands on more than 94% and will achieve its target during the remaining project life time.	**S**	The project has contracted an independent consultant to undertake environmental and social impact assessment of the project. According to findings of the consulting firm, the project has multiple environmental benefits in addition of GHG emission reductions. Protection of environmental degradation and water pollution by siltation and waste; normalizing weather condition of the cities, protection of flooding and its impact on infrastructure, improving living condition of the community through creating green and clean surroundings and job creation are the most valued project impacts reflected in the report.
Indicator 2: Cumulative weight of organic waste diverted from landfills for composting, tonnes (footnote: As shown in Table O.2 in Annex O, the quantity of organic waste available for composting depends to the collection efficiency and the disposal efficiency that vary between 50% and 91%.)	404,000 tone/year	A total of 363,704.93 tons of organic waste has been diverted from land fill for compost production. Moreover, Integrated Solid Waste Management Value Chain Analysis has been conducted for six cities based on which alternative options such as involvement of the private sector, where the MSEs can be engaged, community incentives etc. have been proposed to enhance their collection and disposal efficiency	ProDoc Project Tracking tool Annual Reports MTR	This implies the project will meet its target during the remaining period of the project	**S**	The consulting firm has also provided theoretical and practical training on ISWM value chains (source sorting, transporting, composting, recycling and marketing) for staff and people engaged along the value chain in the six project targeted cities. In order to enhance compost production both in quantity and quality, the project has procured 6 semi-automatic tractor pulled compost turners, 60 compost fleece and 12 digital thermometers. Hands on training on how to operate compost machines have been provided tor a total of 10 MSEs members of the cities. By now the cities have reached at annual compost production of more than 45, 000 tones

Indicator 3: Number of gender-disaggregated jobs created from the establishment of an enhanced compost value chain (footnote: The numbers are direct jobs created in composting activities only. Jobs created have been calculated for each city/town in Table O.8 in Annex O. Composting activities are not expected to generate job loss among scavengers on landfills who predominantly rely on dry recyclables.)	744 (50% women)	A total of 68,051 jobs have been created so far as a result of project intervention. Out of this 45,596 jobs have been created during the reporting period. The breakdown is as follows: •17,468 (16,556 temporary, 912 permanent; 56% women) in ISWM •28,128 (26,312 temporary, 1,816 permanent; 54% women) in UGI.	ProDoc Project Tracking tool Annual Reports MTR	Target Achieved	**HS**	Towards this end, training on ISWM (source sorting, transportation, recycling, CMC windrow composting) and UGI (urban green infrastructure implementation approach, nursery establishment and management, tree post planting management, survival rate counting of planted trees, and livelihoods options of afforestation/reforestation activities) have been provided to the beneficiaries. Moreover, the MSEs have been supported by providing Personal Protective Equipment (PPEs). In order to ensure sustainability market linkages are created for compost and MSEs are linked with micro finance Institutions to access loan.
***OUTCOME 1**: Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems*						
Indicator 1.1: Number of transposed standards (1 SWM and 1 UGI) for use by local and regional governments	2	Both standards (UGI and ISWM) have been transposed to the cities. Moreover, with the aim of establishing systems, increase community ownership and sustainability of project interventions in solid waste management and UGI, guidelines, manuals and model MoU have been developed and cities supported in mainstreaming them.	ProDoc MOV/ISWM Standard MOV/UGI Standard	Target achieved	**HS**	Training has been arranged to city leadership and experts on the standards and guidelines to ensure practical use of the documents. Accordingly, the cities are using the standards in guiding their waste management and Urban Infrastructure Development practices.
Indicator 1.2: Number of households source-sorting domestic waste (footnote: The targets are set in equivalence	355,000 households	During the reporting period, a total of 123,226 households have been practicing source sorting (324,282 households so far). Information, Education and Communication	Pro Doc Project Tracking tool Annual Reports MTR	Target achieved	**HS**	Consecutive awareness raising program was conducted using Ethiopian Television, regional televisions and different FM and community based radios on solid waste

of % households that will carry out source-sorting, and will need to be converted into absolute numbers based on the demographic statistics produced by the municipalities. The targets are set in accordance with the investment plan for composting given in Table 12 of the Project Document and the collection efficiency that are expected to be achieved at the mid-term and end of the project.)		(IEC) materials on solid waste source sorting (1000 brochure and 8000 posters) has been developed and published using local languages (Amharic, Afan Oromo and Tigrigna). The published materials have been distributed to the project cities so as to reach the community for awareness raising program.				sorting, recycling, composting and greenery development activities. As a result, a total of 24 radio and 17 television programs have been transmitted to raise public awareness by ministry and project cities. Solid waste sorting has been introduced and up scaled to 58 new villages of the six project cities. To support the up scaling a total 119,676 pairs of different colored waste sorting sacks, and 1200 dust bins have been distributed to the new 58 selected model villages as incentive mechanisms to sort solid waste at source. In addition to this, onsite training has been delivered for model households participating in source sorting.
Indicator 1.3: Tonnes of organic waste produced according to adopted standards	45,000	The cities have reached at more than 45,000 tone of annual compost production capacity. A total of 109,220.7 tons of compost has been produced from 363,704.93 tons of organic waste in the past four years. In order to enhance compost production both in quantity and quality, the project has procured 6 semi-automatic tractor pulled compost turners, 60 fleece and 12 digital thermometers. Hands on training on how to operate compost machines have been provided to a total of 10 MSEs members of the cities. The cities are also conducting laboratory testing regularly in collaboration with universities and agricultural research institutions.	ProDoc Project Tracking tool Annual Reports MTR MOV/Compost Standard MOV/Compost Guidelines	Target achieved	**HS**	Based on recommendation from project Environmental and Social Impact Assessment, the project is procuring 12 tractor pulled trailers for separate transportation of organic waste to ensure quality of compost. Moreover, the project has created market linkage with potential buyers. Accordingly the MSEs have earned 162,018 USD income from sales of compost this year. The MSEs are also provided with Personal Protective Equipment due to the COVID-19 pandemic and concerns with social distancing and respective trainings on how to use the PPE and stay safe during the pandemic

***OUTCOME 2**: A market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilisation*						
Indicator 2.1: Number of established MSEs in the ISWM-UGI value chain	12	A total of 127 MSEs (55 in ISWM and 72 in UGI) have been established and trained on ISWM-UGI value chain in the last four years. Moreover, support has been given to the MSEs with working tools and equipment (PPEs). Special attention has been paid to the MSEs following outbreak of COVID-19 pandemic while sustaining their stay in the business. More support on PPEs and awareness raising on work safety have been provided as a result.	ProDoc Project Tracking tool Annual Reports MTR	Target achieved	**HS**	Market for both recyclable waste and compost is affected by COVID 19. The cities have reprogrammed some of their budgets for compost and recyclable waste procurement to compensate income lost by the MSEs. As of now the market is reviving back and the MSEs are generating income form both the organic (compost) and non- organic waste business.
Indicator 2.2: Value (US$) of long-term contracts between composting MSEs and public entities and private companies for the supply of compost and non-organic recycled waste	US$ 3.6 million	The MSEs have earned USD 743,650.13USD (162,018 USD from sales of compost and 581,632.13 USD from sales of non-organic recyclable wastes) during the reporting period. So far MSEs have earned USD 2,554,743.13 from both activities since 2017	ProDoc Project Tracking tool Annual Reports MTR	Target achieved	**HS**	Long term contracts have been signed between different companies and MSEs both for compost and non-organic recyclable wastes sales contract. The project has promoted compost and recyclable waste through contacting potential buyers via project management staff and recruited consulting firm.
Indicators 2.3 : Number of established voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives	6	Carbon offset mechanism for Ethiopian Voluntary Carbon Market has been established by well experienced consulting firm named KPMG. Towards this end: •Training on the carbon offset mechanism design and operational manual has been provided for experts drawn from Mo, EFCCC and MUDC. •Website page has been created to promote and process carbon offset transactions. •A brochure to promote the	ProDoc Annual Reports MOV/Carbon offset https://www.efccc.gov.et /ecc-registry.html	Target achievement on progress	**S**	However following outbreak of COVID 19, companies that showed interest to take part in the initiative are not fully operating their business that has led to low interest. The project is working on establishment of local emission reduction verifiers and validators in collaboration with Ethiopian Environment, Forest and Climate Change Commission.

		scheme is produced and sample project is developed for one city.				
***OUTCOME 3**: A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions*						
Indicator 3.1 Number of established standardised baselines for calculating emission reductions	3 Baselines	Three standardized baseline for calculating emission reductions has been established for the six project cities.	ProDoc MOV/MRV Baseline	Target achieved	**HS**	The baselines includes the standardised baselines for (i) compost production using the organic fraction of landfill waste; (ii) urban and peri-urban reforestation of degraded land; and (iii) displacement of non-renewable fuel wood with renewable biomass generated by managed forests.)
Indicator 3.2: Gender-disaggregated population covered by a registered UNFCCC NAMA for national ISWM/UGI initiatives (footnote: This indicator will be measured as the male and female population of each of the 6 cities.)	Total population of the 6 cities/towns	Registration of the population of the 6 cities/towns Adama, Bahir Dar, Bishoftu, Diredawa, Hawassa and Mekelle covered by the NAMA COMPOST project in the UNFCCC NAMA registry is on final stage	ProDoc Public NAMA - Home (unfccc.int)	Target achieved	**HS**	The necessary document is prepared and approved
***OUTCOME 4**: Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework*						
Indicator 4.1: Capacity (tonnes of compost produced per year) of operational composting plants (footnote: Composting plants will be modular and their capacities will be scaled up in proportion of compost produced.)	45,000 tone/year	Construction of six composting sheds has been already completed and MSEs engaged in compost production outside of the sheds are supported. The total annual compost production capacity of the cities has reached more than 45,000 tones. A total of 109,220.7 tons of compost has been produced from 363,704.93 tons of organic waste in the past four years.	ProDoc Project Tracking tool Annual Reports MTR	Target achieved	**HS**	In order to enhance compost production both in quantity and quality, the project was able to procure 6 compost tractors along with its turners, 60 fleece and 12 digital thermometers. Hands on training on how to operate compost machines have been provided to a total of 10 MSEs members of the cities. Based on recommendation from project Environmental and Social Impact Assessment, the project is procuring 12 tractor pulled trailers for separate transportation of organic waste to

						ensure quality of compost.
Indicator 4.2: Area (ha) of degraded sites transformed into green space (footnote: Including rehabilitation of open waste dumps, open spaces and riparian corridors.)	4 areas	2,548.85ha of open degraded and riparian corridors have been rehabilitated.	ProDoc Project Tracking tool Annual Reports MTR	Target achieved	**HS**	Towards this end, technical assistance and trainings have been provided to project cities on the rehabilitation of degraded open spaces and riparian corridors (site identification, clearing, tree planting, post planting management and estimating survival rates).
Indicator 4.3: Number of hectares of reforested degraded land supported by compost-grown seedlings produced by nurseries	33,309	A total of 19,410.27 ha of land has been reforested in the project cities during the reporting period. The total progress of afforestation/reforestation activities in four year is 31,871.96ha. This achievement is the result of project support and national greening program of Ethiopian government in the following areas: •Establishing/expanding nursery sites to raise enough seedlings to cover the area (more than 15 million seedlings have been raised for plantation). •A total of 33,000ha of land have been identified for afforestation/reforestation purposes prior to plantation, Title deed has been secured for 32,000ha of land out of the identified area in four years.	ProDoc Project Tracking tool Annual Reports MTR	Target achievement is on progress	**S**	Bylaws have been developed and training arranged on community and stakeholders awareness raising and mobilization which has enhanced engagement and coordination of stakeholders on land rehabilitation; on enhancing and estimating survival rate of tree seedlings; and on site identification, development of site plan including zoning for afforestation/reforestation and fuel wood. •A total of 72 MSEs (11 MSEs during the reporting period) have been screened and trained in plantation of trees and management. The MSEs are engaged in alternative livelihood activities in the afforested areas of after signing MoU with the cities.

The TE also assessed the project results as measured by broader of relevance, effectiveness, efficiency, sustainability, country ownership, gender equality and Women Empowerment, other cross-cutting issues, GEF Additionally catalytic role and progress to impact and Impact of COVID -19 on achievement.

4.3.2 Relevance

The NAMA COMPOST project is well placed within the local context and contributes to SDGs 8, 11, 13, and 8. Through the implementation of a Nationally Appropriate Mitigation Action component of outcome 3, it directly supports the UNDAF Outcome that is the key government institutions at federal and regional levels, including cities, are able better to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable resource management. The strengthening the regulatory and legal framework and institutional coordination mechanisms to integrate ISWM and UGI within urban systems under outcome 1 supports strategic objective of Ethiopian government's Urban Development and Micro and Small Enterprises Development Strategy Growth and Transformation Plan (GTP) in Ethiopia.

The project design and its activities, outputs and outcomes are highly relevant to the policies and priorities of the key stakeholders. The ProDoc shows that the project contributes to global environmental benefits through GHG reductions in three ways: (1) Avoid methane production in landfills, (2) Urban forestry and (3) Generation of renewable biomass. COMPOST project PocDoc also shows that the project contributes to GEF Focal Area of Climate Change Mitigation while the project prepares GEF Tracking Tool, the Climate Change Mitigation Tracking Tool. The Contribution of the project to Sustainable Development Goals[1] is not described in the project document but available in UNDP website[2] and discussed in the Midterm Review Report. In order of magnitude of contribution, NAMA COMPOST contributes to SDG 11: Sustainable cities and communities through making cities and human settlements inclusive, safe, resilient, and sustainable, SDG 13: Climate action through making urgent action to combat climate change and its impact, SDG 15: Life on land halt biodiversity loss and SDG 8: Decent work and economic growth through full and productive employment and decent work.

The project's alignment with international framework is vivid in its linkage with the UNFCCC's Nationally Determined Contributions (NDC) on reductions in greenhouse gas emissions under UNFCCC. Ethiopia already ratified the Paris Agreement on 9 March 2017, turning the INDC into its NDC[3]. Sectors identified to mitigate GHG are Agriculture (livestock and soil), Forestry, Transport, Electric Power, Industry (including mining) and Buildings (including Waste and Green Cities). The aim is to reduce national GHG level by 64% in 2030 from "business as usual" level. The institutional and individual technical capacities gained, experience and knowledge acquired during the NAMA development process provides a good basis for NDC development. Moreover, some NDCs already include specific mitigation actions/ NAMAs and/or provide important information as a reference and starting point for developing concrete actions.

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[1] The United Nation's Sustainable Development Goals. https://www.un.org/sustainabledevelopment/

[2] https://open.undp.org/projects/00096338

[3] https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en

Alignment of the project with UN priorities is given on the first page of the project document. The project aligns with UNDAF outcome 2: private-sector driven industrial and service sector growth is increasingly inclusive, sustainable, competitive and job-rich, outcome 5: key Government institutions at federal and regional levels, including cities, are able better to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable resource management and outcome 13: national and subnational institutions apply evidence-based, results-oriented and equity-focused decision-making, policy formulation, programme design, monitoring, evaluation and reporting. The project is also seen to contribute to UNDP Strategic Plan's primary outcome on primary output solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals, and waste. In addition, the project also contributes to UNSDCF outcome people in Ethiopia live in a society resilient to environmental risks and adapted to climate change.

The COMPOST project perfectly fits with Ethiopia's sustainable development strategies, including the CRGE Strategy, the second phase of its Growth and Transformation Plan (GTP) as well as its Urban Development and its Micro and Small Enterprises Development Strategy. Besides directly supporting the national policies, strategies and action plans, an innovative aspect of the COMPOST project is to develop a financially viable, and therefore self-sustaining, compost value chain that links ISWM and UGI. Since the SWM and UGI systems currently in place in the cities and towns are not fully financially viable, a crucial element of the COMPOST project is to ensure that market-based compost value chain will be financially self-sustaining.

According to KIIs and FGDs provided by interviewed stakeholders and the analysis of the project's context and documents, the evaluators consider that the type of intervention selected has been highly relevant to the needs of MUDC, ESA, and Hawassa, Adama, Bishoftu, Bahir Dar, Dire Dawa and Mekele cities[4] and is in line with UNDAF/ country programme outcomes, UNDP country programme objectives, and Ethiopian government development strategies and programmes. There was a uniform consensus by all interviewed parties that the intervention was timely and addressed urgent needs of the target institutions and the populations of the project cities. The project has been conceptualized based on international best practices on ISWM and UGI approaches and is based on local needs as identified by a needs assessment and involves relevant stakeholders.

The evaluators were informed that main stakeholders at federal, regional and city administration levels were effectively consulted during the design phase of the project. The interviewee at the Municipal Office in Adama confirmed that Adama city was frequently consulted by MUDC/ UNDP during project concept development. The city municipality also invited local authorities, implementing partners and beneficiaries for a project launch. The project activities were discussed and approved at the meeting. A similar approach was used for other five project cities.

"There was adequate preparation when designing the project. A national team from MUDC and UNDP conducted an assessment on the needs and priorities of cities. The assessment identified

[4] Field mission did not consider travelling to Mekele due to security situation. Analysis of data and information for Mekele reflects the status before mid-2021.

problems and potentials regarding SWM and UGI. When preparing the project concept, the national team took data from Adama by consulting us. The concept of annually planning and allocating areas for greeneries was taken from Adama's experience during the national team visit, which became an essential part of the project activity and output."

Technical Committee Members in Adama

During the KIIs and FGDs with members of MSEs in Hawassa, Adama, Bishoftu, Bahir Dar and Dire Dawa, employment and livelihood opportunities and improvements in SWM and UGI were among the top priorities of the communities as the two sectors had been given little attention. Project activities such as source sorting, transportation, recycling, composting, nursery establishment and management, and tree post planting management were highly appreciated by communities. Women engaged in both SWM and UGI were both grateful to the project and enthusiastic about their earning ability. According to UNDP focal persons in cities, women benefited most in the project intervention, and they also showed more responsibility in livelihood interventions than men. The number of women engaged in solid waste collection and transportation are higher than their men counterparts. In compost production at the construction sheds, however, men dominated leadership and management roles.

The constructions of six composting sheds for the six cities were greatly appreciated by MSEs. The sheds along with supportive compost production materials reduced their members' workload and improved efficiency of production. Training and awareness creation had sensitized and mobilized communities about the value of waste management and growing trees and plants and reduce dumping of wastes and cutting trees for firewood. Although there are some good practices, the training did not result in sorting wastes at household level where the situation is more common in Bahir Dar and Dire Dawa. Government officials and experts in project cities believed that a continuous awareness creation is vital to change communities' attitude and practices.

The project best addressed the complex and diversified solid waste management, urban green infrastructure, and job creation issues. Its position was consistent with the Ethiopian government's CRGE and GTPs in which cities' needs and problems are underlined. Before NAMA, compost production had been practicing, but we failed due to technical and monitoring problems. The project made linkages between the solid waste collection, compost production, and greeneries manageable. The project's strategy of reusing and recycling non-organic wastes such as plastic bottles and metals was crucial in generating income and reducing wastes. The project adequately integrated solid waste management with urban greenery which had never been the case in our city.

4.3.3 Effectiveness

The development objective of the NAMA COMPOST project was to promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector. To achieve this objective, the project intervention was built on four expected outcomes of the project, as listed below:

1. Outcome 1: Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems.

2. Outcome 2: A market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilisation.
3. Outcome 3: A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions.
4. Outcome 4: Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework.

4.3.3.1 Effectiveness of the project on outcomes

Outcome 1: Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems.

Output 1.1: Developed ISWM and UGI standards that are transposed to the regional (sub-national) level.

The project achieved its planned target of developing two standards on ISWM and UGI. This was done based on a review of existing and endorsed ISWM and UGI standards such as the UGI standards, the solid waste management proclamation and the urban development strategy developed by MUDC. Workshops and meetings were carried out in transposing federal UGI and ISWM standards to the regional bureaus and municipal government. In addition, assistance in documentation of UGI and ISWM standards was provided to the six cities.

Output 1.2: Tools and protocols for the enforcement of legal ISMW/UGI jurisdictions and the adoption of best practices for sustainable land management regarding urban greenery, waste management and ISWM.

The MTR report's recommendation to adjust the number of tools from originally planned six to one was accepted and approved by the responsible body of the cities. A similar tool for safeguarding legal UGI and ISWM jurisdictions for 6 cities was developed and this action supported enforcement of the current land ownership and land-use legislation in the six cities. The title deeds using cadastral maps were adopted as a tool to safeguard UGI and ISWM jurisdictions. So far from a total of 33,309 hectare of land identified for afforestation and reforestation activities, compost sheds and transfer stations in the six cities; title deed was developed for a total of 32,000.1 hectare of land. In addition model by law for community and MSEs greenery management was developed and adopted by cities. In addition, sample by law and terms of reference were developed for MSEs engaged in greenery management in which cities adopted that into their contexts.

Output 1.3: Incentives for, and promotion of source-sorting by households in all kebeles in selected municipalities.

The project achieved its planned target of developing one ISWM guideline in which source sorting was the major component. Cities were supported in mainstreaming the guideline and experts were trained on how to implement. Moreover, awareness raising campaign was carried out by cities through media and community outreach. Accordingly, solid waste sorting was introduced and up scaled to 58 new villages of the six project cities. To support the up scaling, a total 119,676 pairs of different colored waste sorting sacks, and 1200 dust bins were distributed to the new 58 selected model villages as incentive mechanisms to sort solid waste at source. In addition to this, onsite training was delivered for model households participating in source sorting. Moreover, Adama and recently Bishoftu, allocated separate transportation system of tractor pulled trailers for organic and non-organic degradable and non-degradable materials in

which the project propagated to the remaining cities. During the consultant's field mission, however, separate transportation for organic and non-organic wastes were not applied in Bahir Dar, Dire Dawa and Hawassa cities. Recently, newly purchased transported pulled trailers have been under distribution across cities except Mekele.

Output 1.4: An adopted national standard for organic compost with quality assurance systems (QAS) in place at the regional and sub-national level.

Adoption of national standard for organic compost with quality assurance systems (QAS) was developed at national level. Accordingly, the compost preparation standard has been developed and approved by the Ethiopian Standardizations Agency. The guideline and handbook on compost preparation were prepared by technical experts and translated from English to three languages: Amharic, Oromifa and Tigrigna, but the National Standardization Council of the Agency has approved the standard as per the plan.

Output 1.5: A Resettlement Action Plan for illegal settlers within the project boundary according to UNDP's Displacement and Resettlement Standard.

The project did not achieve development of Resettlement Action Plan for the six cities due to its political, administrative and implementation challenges and the situation of the country evicting illegally settled people a Hence, actions were shifted to developing formal areas and with permanent settlers.

Output 1.6: A twinning programme with other cities and towns experienced in ISWM and UGI, and with institutions developing and implementing standards, to inspire and build capacities

Initially, the twining agreement did not materialize due to high turnover of leadership in the cities. However, higher officials drawn from federal as well as project targeted cities visited composting facilities in Austria and Uganda during an exposure visit arranged by the project during the reporting period. Following that, all cities took important measures to start (those who had not started) as well as produce more compost. The compost sheds were built, compost standards were developed and the compost turners were procured based on experience gained from these exposure visits.

Overall Assessment of Outcome 1: The project succeeded to create a regulatory and legal framework, institutional and coordination mechanisms, and tools for supporting the national policy environment. This was specifically essential for integrating ISWM and UGI within urban systems in the six cities. The main tangible results under this component are transposing ISWM and UGI standards to the cities and enabling them to use the standards. The interviewed beneficiaries in cities expressed their satisfaction with UNDP and MUDC inputs for the capacity building workshops in the standards transposing process. The transposing process passed through multiple stages: reviewing of the existing national standard, providing trainings, supporting cities to adopt the standards into their context and ensuring decision makers' endorsement. The comprehensive standards' transposing component under output 1 has built a foundation for institutional improvements which enhanced service delivery and complements Outputs 1.2, 1.3 and 1.4. Moreover, with the aim of establishing systems, increased community ownership and sustainability of project interventions in solid waste management and UGI, guidelines, manuals and model MoU were developed, and cities have already been using them. Continuous training and supportive supervision were provided to city leadership and experts on the standards and guidelines to ensure practical use of the documents. The cities are using the standards in guiding their waste management and urban infrastructure development practices.

However, the project did not achieve development of Resettlement Action Plan for illegal settlers. Two issues are worth mentioning: (1) project activities were implemented in areas where there were less settlements with the objective of avoiding resettlement related tensions, and (2) the political situation and on-going administration challenges hampered implementation of RAP.

MTR of the project recommended considerable revision of the indicators or their end-of-project (EOP) targets, namely drop indicator 1.6 as well as reduce EOP for output 1.1 Indicator from 10 to 2, output 1.2 Indicator from 6 to 1, and output 2.1 and 2.2 indicators from 12 to 24. These changes were officially approved by project steering committee on 16th January 2020.

"My impression regarding contribution of the project emanates from two perspectives; introducing new ways of doing to realize national policies and strategies and capacitating local governments in achieving their social responsibilities. The government has taken cities as major mitigation hubs to climate change. In this regard, the GEF/UNDP funded project has shown us the means to realize goals and objectives stipulated in those policies and strategies. GHG emission reduction through composting solid waste and afforestation of urban and peri-urban degraded areas as well as the market linkage created between the two sectors is a new approach we have learned from this project"

Head of Steering Committee, MUDC

Outcome 2: A market-based system is developed, and participating MSEs are supported professionally to ensure financial sustainability of compost production and utilisation.

Output 2.1: A developed capacity building programme in conjunction with the Entrepreneur Development Centre (EDC) to enhance the occupational health and safety conditions of MSEs especially in SWM and to enhance the entrepreneurship skills of all MSEs.

The project established and trained a total of 127 MSEs (55 in ISWM and 72 in UGI) on ISWM-UGI value chain and achieved its planned target of 24 leading to increased knowledge and skills in ISWM and UGI approaches. This support was given to the MSEs with working tools and equipment (PPEs). This output is overachieved on the establishment and training of MSEs but occupational health and safety conditions of the MSEs required more efforts. MSEs were capacitated through training and provision of equipment and facilities in Hawasa city and all compost sheds including storage, office, toilet, and shower except few arrangement of the main compost shed to the functionality using the turner machine.

Output 2.2: An established financing mechanism to support the establishment of new MSEs and to support skills and technological enhancement of existing MSEs in ISWM/UGI value chain.

MSEs established with the support of the project the saving and credit mechanisms which made them eligible to apply and access credits. The MSEs were supported in developing business plans so that they could access credit from the financing institutions. MSEs in Adama and Bishoft were more successful in accessing credit for MSEs by linking them with MFIs from MFIs while others were also working towards that. Overall, the project achieved its target of reaching 24 MSEs in accessing credit lines and loans from different MFIs.

Output 2.3: Market outlets for compost generated by the municipal composting plants through long-term contracts with public (municipalities, city/town administrations), and private (landscapers, nurseries, farmers) institutions so as to support urban agriculture and peri-urban forestry on a large-scale.

As per the original plan, market linkage for the six cities was created for MSEs working in the municipal composting plants through long term contracts with municipalities and city administrations. Additional market linkages are created with Urban Safety Net and Ethiopian Forest Research Institute. Compost produced in sheds could easily get market but there were issues regarding the quality of compost produced and sustainability of the market. Market linkages were created between municipality greening activities and compost producing MSEs in the six project cities. To improve quality of compost laboratory tests are conducted regularly model farms are being created, separate transportation is introduced and MSEs in most cities created linkage with flower farms and nursery sites as additional market. Compost market potential study was carried out for each city and that supported MSEs in identifying opportunities and challenges. In addition, market linkages were created with Urban Safety Net and Ethiopian Forest Research Institute. Most importantly, two things remained a challenge: finalization and functionality of all six compost sheds, accessing sorted wastes and transporting sorted wastes in separate transport system.

Output 2.4: Market outlets for the non-organic recycled waste processed by the municipal sorting plant through long-term contracts with recycling firms.

As per the original plan, six market linkages were created in the six cities between MSEs and different waste recycling companies mainly in PET type of plastic- plastic water bottles. Market linkages for HDPE type of plastic, card boards, paper among others were also created in small quantity. MSEs signed long term contracts with different companies for compost and non-organic recyclable wastes market. The project promoted compost and recyclable waste through contacting potential buyers via project management staff and recruited consulting firm. To improve quality of compost, laboratory tests were conducted regularly, model farms were being created, and separate transportation was introduced.

Output 2.5: Integrated SWM and UGI Standards in curriculum in education.
The plan to integrate SWM and UGI standards in curriculum in education in 6 vocational institutes and 6 universities did not materialize, but the Ministry for Urban Development and Construction developed model modules and supported MSEs in the six cities in adopting them. MSEs were assessed and given with Certificate of Competence (CoC) in ISWM and UGI by the cities after trainings. The project intensively provided trainings for municipality staff and people interested to be engaged in related business and field of work. The municipality sanitation and beautification department run and oversaw providing CoC. Hence, the project supported trainees and experienced people to pass through CoC tests and got certified at different levels. The process was important to practically check whether individuals possessed the required skills and knowledge. By doing so, skilled labour of the sector increased, and employability of people was enhanced. The project certified 7,741 (60% female) people are certified in ISWM and 2,634 (> 50% female) in UGI.

Output 2.6: An established voluntary carbon offset scheme to support urban and peri-urban reforestation.

The signing six voluntary carbon offset agreements did not materialize as planned. However, carbon offset mechanism for Ethiopian voluntary carbon market was established by a consultant. Essential activities like training and operation manual development, creating website to promote carbon offset transactions and brochure to promote the scheme were carried out. The reason is that due to the COVID-19 outbreak, companies that showed interest initially became less interested.

"Unfair market competition rules the compost market. The quality controlling mechanism is poor. There was a tender notice for compost purchase and a company won the bid with ETB 50/ quintal while the actual market was around 450/ quintal. We learned that the buyer bought not compost but animal dung and unprocessed waste. Such situations would challenge survival of quality compost producers. And a city-wide compost quality control mechanism is important"
FGD participant in Hawassa

Overall Assessment of Outcome 2: The COMPOST project was instrumental in establishment and functioning of the MSEs for ISWM-UGI value chain for the six project cities. As a result, MSEs developed the capacity to produce compost and earned income through compost selling to public institutions. On the contrary, public institutions in the city administrations and MSEs engaged in nursery business and afforestation/ re-afforestation activities had easy access to MSEs compost product for their greenery activities. Long term contracts were signed between different companies and MSEs both for compost and non-organic recyclable wastes sales contract. The project promoted compost and recyclable waste through contacting potential buyers via project management staff and recruited consultant. However, the project failed to establish voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives. This negatively impacted compost producers' production and marketing potential.

The findings from KIIs and document reviews indicated that, the project provided CoC scheme in ISWM and UGI, and further created linkages between compost producers and compost users. Some of CoC certified people were engaged in MSEs activities while others got employment opportunities in public institutions in their residential cities and beyond. Public institutions in the city administrations and MSEs engaged in nursery business, afforestation and re-afforestation and in compost production. They also sold seedlings to the municipality for urban and peri-urban afforestation and rehabilitation activities. Therefore, the project benefited stakeholders through job creation, reducing wastes, strengthening greeneries and cleaning cities. However, a few challenges were experienced, these are; i) production of quality compost ii) weak market linkages and iii) question of sustaining of MSEs.

Quality compost was mainly dependent upon how source sorting worked effectively. Delivering quality compost prevents the contamination of the organic component of MSW at source. Composts produced could have different level of quality; for example, the highest and food-grade quality is required for the application of compost in urban agriculture, whereas lower-quality compost can be used in afforestation and reforestation projects. But the standards and QAS was not developed according to compost end-use as planned. Interviewed MSEs stated that they faced practical challenges in winning bids as poor-quality compost producers always took the price with their lower prices. The capacity of compost producers has been improving and they were able to produce compost with large quantities. The market linkage is mainly dependent on buyers from government institutions. Private sector and farmers use chemical

fertilizers and their involvement in the compost market requires more work. In addition, sustainability of MSEs varied across cities. For example, the compost producing MSEs in Adama were more experienced and started selling their products to big private companies whereas MSEs in Bahir Dar were organized latter which need more support and follow up.

Outcome 3: A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions.

Output 3.1: Established standardized UGI and ISWM baselines for calculating emission reductions.

The project established three UGI and ISWM standardized baselines as per its original plan. The standardized baselines for calculating emission reduction were established for the six cities in three components. This includes standardized baselines for i) compost production using the organic fraction of landfill waste; ii) urban and peri-urban reforestation of degraded land; and iii) replacement of non-renewable fuel wood with renewable biomass from l managed forests.

Output 3.2: Developed MRV mechanisms for each of the 3 elements in Output 3.1.

The project developed MRV mechanisms for elements from Output 3.1 as planned. Measuring, Reporting and Verifying (MRV) mechanisms were established for three components: compost production using the organic fraction of landfill waste, substitution of fertilizers for urban greenery or re-afforestation and urban and peri-urban reforestation of degraded land.

Output 3.3: Developed comprehensive technology baselines and prioritization of technology options for ISWM and UGI.

The project developed a comprehensive technology baseline and prioritization of technology options for ISWM and UGI. This was achieved through conducting two detailed studies, first on biogas production from abattoir waste, and secondly on organic solid waste to produce furic and fumic acid used as a binder by ATA for blending in organic fertilizers.

Output 3.4: NAMA registered on the UNFCCC NAMA Registry and implemented – initially covering 6 regional cities and towns but with the potential for scale-up within Ethiopia

Registration of the population of the 6 cities of Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle covered by the NAMA COMPOST project in the UNFCCC and NAMA registry is reported to be on final stage. The necessary documents are prepared and approved by the government while online registration for UNFCCC NAMA reached need more support.

Overall Assessment of Outcome 3: With the objective of facilitating NAMA development and implementation, this outcome was achieved through developing standard baselines for calculating emission reductions. The standard baselines established for the six cities include:(i) compost production using the organic fraction of landfill waste; ii) urban and peri-urban reforestation of degraded land; and iii) displacement of non-renewable fuel wood with renewable biomass generated by managed forests. Under this outcome, the project was developed and submitted to the UNFCCC NAMA Registry with the goal of: a) providing robust and credible MRV for the GEF-financed project, and b) scaling-up the project beyond the geographical boundaries being supported by the GEF.

Outcome 4: Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework.

Output 4.1: Composting plants built, equipped, and implemented in 6 regional cities and towns and linked with the ATA's blending facilities to progressively complement blended chemical fertilizers with compost.

The construction of six composting sheds was completed and MSEs engaged in compost production outside of the sheds were supported. The plan was to produce six sheds, but the project achieved its accomplishment of three sheds. The project also supplied 6 compost tractors along with its turners, 60 fleece and 12 digital thermometers. Hands on training on how to operate compost machines were provided to a total of 10 MSEs members of the cities. The project procured 12 tractor pulled trailers for separate transportation of organic waste to ensure quality of compost and distribution was undergoing during the consultant's field mission based on recommendation from project ESIA. Of the six compost sheds, however, drainage work, fencing and vehicle access required more work for Hawassa compost shed while Bahir Dar compost shed also needed completing vehicle access. In Dire Dawa, the compost sheds needed additional work and compost production outside of the sheds was taking place. Overall, the total annual compost production capacity of the cities has reached more than 45,000 tones.

One of the activities under this output on blending chemical fertilizer with compost output was dropped and funds reallocated. The project changed the target of this output by building four extra composting plants from the two originally planned. The changes were approved during the first meeting of the PSC and enacted in quarterly and annual reports. These changes aimed to improve the delivery of this output and demonstrate a degree of adaptive management.

Output 4.2: Rehabilitated and cleaned open green spaces and riparian corridors.

A total of 2,548.85ha of open degraded and riparian corridors were rehabilitated in all the six cities. Project staff provided technical assistance and trainings to project cities on the rehabilitation of degraded open spaces and riparian corridors on site identification, clearing, tree planting, and post planting management and estimating survival rates.

Output 4.3: Reforestation of 33,309 ha of degraded land in 6 cities and towns, including support for existing nurseries to produce compost-grown seedlings

The project completed restoration of 32,055.36 ha of degraded land through afforestation and reforestation activities. The accomplishment was supported by national greening program of Ethiopian government. Establishing/expanding nursery sites was also carried out to raise enough seedlings to cover the area. To ensure success and sustainability, nursery sites were established and expanded and guideline on species selection were developed. To ensure success and sustainability, nursery sites were established and expanded; guideline on species selection was also developed.

Overall Assessment of Outcome 4: The construction of six composting sheds and equipping them with essential facilities improved both the quantity and quality of compost production. The total annual compost production capacity of the cities reached more than 45,000 tones/ city. A total of 109,220.7 tons of compost were produced from 363,704.93 tons of organic waste in the project period. Most importantly, the effectiveness of this project is manifested

through linking composting and urban and peri-urban greening, contributing to GHG emission reduction and by diverting the organic fraction of waste from land fill which otherwise would emit methane to pollute the air and sequestering carbon dioxide. It also protected environmental pollution by using compost as replacement to chemical fertilizers for urban greening. The project has achieved a total of 413 tons of carbon dioxide emission reduction with 293 kilo tCo2 from the greenery and 120-kilo tons of Co2 from composting activities.

Desk review and KIIs findings indicated that the soil and water conservation structures were built and this increased vegetation cover as a result of area enclosures and tree plantation on cliffs surrounding the cities retained the topsoil from erosion, and created a favourable condition for more vegetation to regenerate. This positively impacted on the environment through carbon sequestration, protection of biodiversity, protecting land degradation and maintaining ecosystem services of the areas. The effect was farfetched in protecting and maintaining water bodies like Lake Hawassa of Hawassa city, Lake Tana of Bahir Dar, rivers such as Abay and Awash to which rivers from those cliffs surrounding the cities drain were being affected by siltation as a result of soil erosion and landslides in these areas. The gullies and degraded areas were rehabilitated that defiantly reduced siltation on those water bodies caused by extreme flooding mainly during raining season. Trees were planted by the community in their compounds, roadsides, parks and areas surrounding the cities are now contributing to prevention of extreme heat and hence enhancing urban resilience to the impact of climate change in the six cities.

"There are a lot of achievements that would lead to long term impact of the project. The key ones are strengthening capacity, securing title deeds for greeneries, creating job opportunities, and developing ISWM and UGI standards and tools. For example, the project impact became evident in protecting and conserving Lake Hawassa. The lake surrounds the city's built-up area, and there had been too much pressure on the city. Waste production and its improper disposal were challenging; the volume of lake water was also decreasing. There are many improvements because of project intervention. When reducing solid waste, using compost for greenery, and adequately managing urban greening sites, the city is now clean and the lake's condition is also improving."

FGD participant in Hawassa

Although gender attributed significant importance, the project document failed to outline gender specific indicators and objectives. Sex-disaggregated data was collected by cities for women participation in training, MSEs engaged in ISWM and UGI and gender related results were reported as appropriate. This information was provided in annual reports, progress tracking matrix and training reports. Interviewed stakeholders highlighted the positive results achieved under difficult circumstances in the project and that the project was implemented at a very critical time. The targeted institutions further expressed their satisfaction with the project modality of combining ISWM and UGI as this will have a long-term positive impact. All members of MSEs interviewed indicated there was effective communication with the UNDP project team. The project team interacted in a flexible and responsive manner and gave the beneficiaries a sense of ownership. The respondents in Bahir Dar explained that the project team effectively followed up the implementation of activities to check the quality of deliverables. All beneficiaries emphasized that, they have appreciated the support from UNDP CO.

4.3.3.2 Effectiveness of the project on Urban Green Infrastructure Development

Federal level Urban Green Infrastructure Development Standard has been transposed to the six cities on which staff of the municipality and relevant stakeholders such as Urban Environmental Protection, Urban Land Management and Urban Agriculture offices are trained with the support of the project. Cities are using the standard to guide their planning and implementation of urban greening activities. The project has supported the start of new nursery sites in three cities; Mekelle with seedling raising capacity of 1,500,000/year, Dire Dawa 2,600,000/year and Bahir Dar 2,000,000/year. Moreover, seedling raising capacity of two nursery sites, Bishoftu and Adama has increased by 800% and 600 % respectively. The project has also identified tree species suitable for agro-ecological condition of each city to guide species selection in raising seedlings, provided water reservoirs, trained and certified people employed in the nursery sites.

As a result of repeated awareness raising programs and by providing seedling for free, community of the six cities are planting trees in their compound and surrounding areas. Community participation during tree plantation is increasing from time to time as informed by the municipality. Waste dumping sites have been rehabilitated, degraded areas have been restored and peri-urban areas reforested. As a result greenery coverage of the cities is improving form time to time. In cities like Adama and Dire Dawa, their exposure for flooding has reduced significantly due to the terracing constructed for the seedlings and improved management of the land. Individuals are motivated to manage their gardens by planting fruits and vegetables, especially during the COVID-19 pandemic. The progress in UGI is shown in figure 3 below.

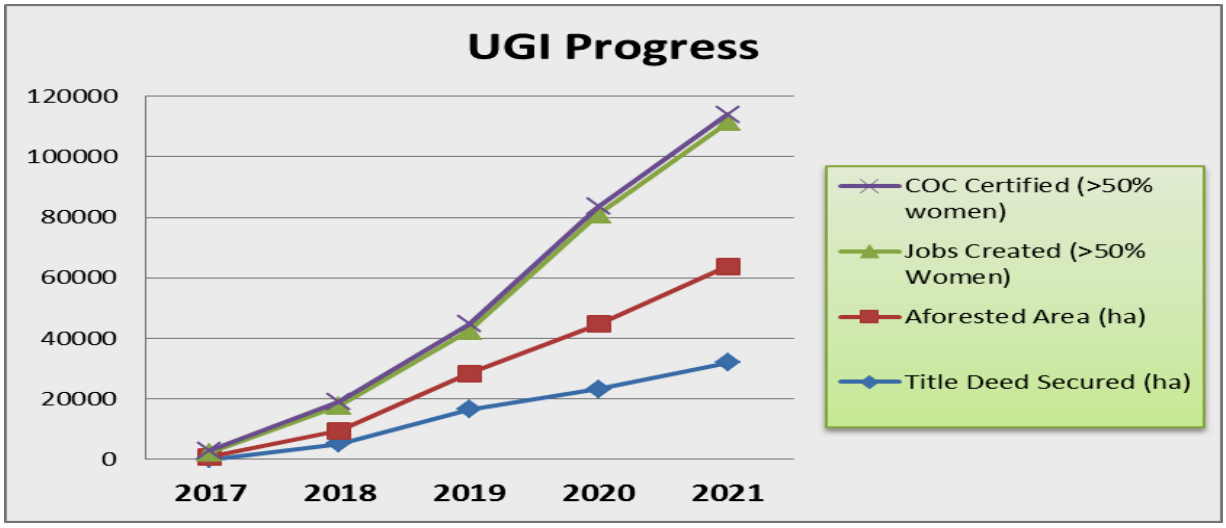


Figure 3: UGI Performance

People engaged in urban greening business and employed in government nursery sites are well trained and certified (level 1 to level 3) after being tested and passing through Certificate of Competency (COC) evaluation processes. So far 3498 number of people (>65 % women) are certified. This has narrowed the existing skill and knowledge gaps in urban greenery practices and made the sector more successful. Those COC certified people are being hired by other sister towns. For instance, Hawassa town has hired a successful greenery certified expert from Bishoftu town. Participation of MSEs in urban greenery related business; seedling raising and sales, landscaping, park management has increased. Temporary and permanent jobs are created to more than 47,000 people (50% women) in this sector. In Adama and Bishoftu towns, this urban greenery has created jobs for migrant and displaced people. New business opportunities like Apiculture and diversification of livelihoods are being introduced. Bishoftu used to be the

only source of seedling in the country and cities were forced to travel more than 400 Km to buy seedling which made cost per tree planted very high. With the support of the project however, the remaining five cities have now become source of seedling for themselves as well as neighboring cities and towns. This will create opportunities to grow the right tree species which is ecologically fit to their respective areas. MSEs are supported to start plant nursery business and create market linkage with afforestation program of the project that helped them continue operating until they find additional market.

Nursery Site in Bishoftu

The summary of UGI Key Achievements for project is as shown in Table 9 below.

Table 9: Summary of UGI Key Achievements (2017-2021)

Output(s)	**Target(s)**	**Achievement(s)**
Title Deeds Developed (ha)	33,309	32,000.1
Afforestation/reforestation (Ha)	33,309	**31,871.96**
Jobs Created(#)		47,459
Female		25,846
Male		21,613
Temporary Jobs(#)		43,886
Female		23,535
Male		20,351
Permanent Jobs (#)		3,573
Female		2,171
Male		1,402
COC Certification	Remark/s	
Level 1	(53% Female)	1,694
level 2	(50% Female)	897
level 3	(60% Female)	43
Total COC Certification	(>50% Female)	2,634

Calculation of CO2 Emission reduction from UGI

The UGI intervention through plantation of urban and peri-urban forests, the project achieved rehabilitation and/ planting of 31,871.96 hectare. By using the FAO Ex-Ante Carbon balance Tool [ExACT, the emission factor to estimate carbon sink is 9.2tCo2/ha/yr. Therefore, the emission reduction as a result of the project's UGI intervention is:
= 31,871.96 hectare X 9.2tCo2/ha/yr] = 293,222 tCo2/ha/yr.
The *emission reduction from UGI is approximately* ***293 kilo tCo2.***

4.3.3.3 Effectiveness of the project on Integrated Solid Waste Management

The project has been under implementation since 2017 for supporting the improvement of Integrated Solid Waste Management in the six cities (Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle). Project intervention was along the value chain of Municipal Solid Waste Management of the six cities and there are changes observed as a result. The project intervention in ISWM started from transposing standards and undertaking community awareness raising activities through door to door communication, school outreach programs, using posters, community sensitization workshops as well as using national and local print and non-print media such as radio and television on waste handling in general and waste segregation in particular.

This is followed by identification and establishment of model villages where colored bags are distributed to encourage waste segregation at source. Primary waste collecting MSEs are also made responsible to teach and lobby the community to segregate their waste at source. Similarly colored dust beans were put on pedestrians along streets with high traffic. As a result, behavioral changes were observed in the community mainly in the model villages who has started segregation of waste at source as well as exercising of proper disposal of waste from their houses. The model villages are regularly cleaning their surroundings and there is no dumping of waste in these areas contrary to the case prior to the project intervention. Some of the households, with enough space in their compound have started small scale composting in their house and use it for their gardening and greening.

Transposing the Integrated Solid Waste Management Standard has also contributed to the observed improvement in waste collection and transportation in the six cities. There have been training on solid waste management to staff and leadership of the municipality including exposure visits or study tours made to countries with better waste management system and people engaged in Solid Waste Collection and Transportation. In this regard, the study tour was made to Uganda and Austria. Moreover, the project has supported the training and certification selected staffs which helped for the knowledge based operation and management of Integrated Solid Waste Management in each projects sites. The project has also provided training on Occupational Health and Safety procedures and distributed safety materials to enhance the safety of people engaged in this business.

The start and scaling up of recycling and composting in the six cities have also contributed to the improvement seen in Municipal Solid Waste Collection and transportation. The project has supported construction of six composting sheds with total area size of 18,900 m^2 and annual composting capacity of 86,000 tons of waste. In addition to constructing the sheds, the project has supported development of composting standard and manual, arranged hands on training to

the MSEs on compost preparation, provided basic composting equipments such as semi-automated composting machine that has improved quality and quantity of compost, compost flees, thermometer etc to the MSEs. The MSEs collect organic waste from households, vegetable market, urban farming areas and by segregating from transfer stations which is transported to the composting sheds either by themselves mainly in Adama to which they are paid by the city administration or by the municipalities' vehicles. So far 109.700 tone of compost has been produced from 365,400 tons of waste.

Compost Shed Bishoftu

Laboratory test on C:H ratio, PH value and moisture is conducted on sample compost with the support of the project (two times) and the MSEs have established relationship with nearby agricultural research institutions and universities for similar support. In this regard, in Bishoftu as they are piloting and testing the impact of compost on crops and vegetables (see table below), the local agricultural research center is working and supporting on the piloting of compost. In all the six cities of the project site, major buyers of the compost are the city administration for plant nursery and urban greening, urban safety net program for urban greening, business firms for compound greening and individuals for home gardening.

The project has also contributed to the start and strengthening of solid waste recycling in the six cities. MSEs are organized and supported to collect and sale (semi processed or as it is) recyclable waste such as paper, PET plastic water bottles, materials made of HDPE types of plastic, metal among others to business companies operating in the recycling business. So far 65,000 tone of recyclable waste has been collected and sold. The intervention in the Integrated Solid Waste Management has also job creation benefits in addition to the improvement in the solid waste management practices of the cities. So far temporary and permanent jobs have been created to 14,000 people (50% women) in this area of operation. The progress of ISWM is illustrated in figure 4 below.

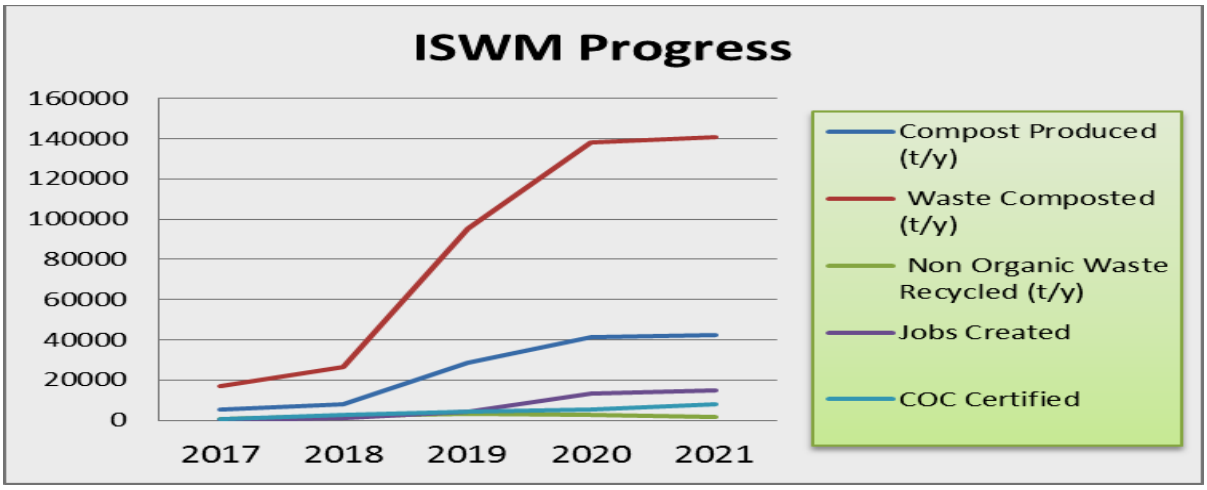


Figure 4: Progress in ISWM

The summary of ISWM Key Achievements for project is as shown in Table 10 below.

Table 10: Summary of ISWM Key Achievements (2017 - 2021)

Output(s)	**Target(s)**	**Achievement(s)**
Amount of Compost Produced in Tons	121,264	**109,220.70**
Amount of Organic Waste Converted in Tons	383,749	**363,704.93**
Income Generated from Compost Market in Birr		19,947,362.50
Compost Purchased by City in Birr		15,637,297.5
Amount of non-organic recyclable waste collected and sold in tons		10,003.33
Income generated from non-organic recyclable wastes in Birr		60,493,882
Total Job Created (#)		20,592
Male		10,173
Female		10,419
Temporary Job Created (#)		17,486
Male		8,744
Female		8,742
Permanent Job Created (#)		3,106
Male		1,429
Female		1,677
Total CoC Certification		7,741
Level 1		3,313
Level 2		3,564
Level 3		864
Waste Sorting Practice by # of Household		215,808.00

Calculation of CO2 Emission reduction from ISWM

The ISWM intervention through composting activities to avoid emissions of methane in landfills, the project achieved = 363,704.93 tons solid organic waste produced and to be Converted into compost. It is assumed that only 30% (0.3) of the waste produced will be converted into compost.

The compost produced by this project = 363,704.93 tons of solid waste X 0.3 = 109,111.45 tons
With a compost offsets = 1.1 tons of carbon, the emission reduction as a result ISWM is;
= **[**109,111.45 tons x 1.1 tons of Co2]. = 120,022.6
Therefore, *the Emission reduction from ISWM is approximately* ***120 tons of CO2.***

The total CO2 emission reductions as a result of the project UGI AMD ISWM interventions, is approximately [293 kilo tCo2 + 120-kilo tons Co2] = **413 kilo tons of Co2**

Job Creation

The project has created permanent as well as temporary jobs for many people; men, women, youth along the value chains of Integrated Solid Waste Management and Urban Green Infrastructure Development. About 43,886 number of people are temporally engaged in Urban Greenery Initiative related project activities such as soil and water conservation structure development, digging of pits for tree plantation, clearing of weeds and tree plantation every year since the start of the project. Similarly the integrated solid waste management component creates 11,903 temporary jobs in waste segregation, street cleaning and other related activities.
Permanent job is created for 3,573 number of people organized as Micro and Small Enterprises with the support of the city administration. These MSEs are engaged in compost production and sales, solid waste transportation service provision to the municipality, solid waste recycling and sales, seedling raising and sales, provision of café services at city parks, fuel wood plantation and sales, forest management and sales of forest products such as grass, beehives etc and being employed by the city administration under different functions. The project has also trained 2,805 numbers of people in urban greenery and waste management related disciplines who are certified up on completion of the required qualification tastes which has enhanced their skill and employable capacity.

Towards job creation the project's contribution has been training people in urban greenery and waste management, Occupational Health and Safety, Small Business Management and Marketing as well as provision of basic production and safety materials.

Demonstration Site Bishoftu

NAMA project was a springboard in addressing Hawassa's critical SWM and urban greenery challenges through creating job opportunities. The project increased dwellers' awareness on properly sorting and reusing waste and greening neighbourhoods. The project uplifted the city's effort in ISWM and UGI activities. The project specifically impacted the city on the following: (i) developed a system of collecting solid waste from sources and different groups were organized doing these tasks. MSEs, and employees of the municipality engaged on this. Most importantly and in addition to this, people learned that 'Waste is not waste; it is a resource'. Accordingly, 1200 individuals took the initiative of collecting, sorting, and selling/ disposing wastes (ii) Urban greenery part of the project was so important for the city in that green areas (sites) were identified, properly fenced, and protected, and site plans were prepared for each. They are also part of the city's structural plan. It sounds that the project put pressure in accomplishing some activities through co-financing approach in a positive way. The challenge helped the municipality adopt the co-financing modality which increased project's impact.

4.3.3.4 Factors that contributed to achievement of outcomes and outputs

The implementing partners (MUDC and the six cities) are committed to respond to the needs of the city dwellers in the management of waste as well as increasing the greenery to make the cities habitable. They committed significant amount of financial resources to make the project achieve its outcomes (effectiveness). The project Manager, the implementing partner and the donor worked very hard to make coordination between different sectors effective through establishment of steering and technical committees to steer and guide the implementation.

4.3.3.5 Challenges that has been faced during project implementation

A number of challenges were identified which are: I) Increasing cost of construction materials due to inflation in the country; ii) Accessing and transporting sorted wastes - biodegradable and non-organic – separately. It is not widely practiced, and its sustainability is questionable. Changing communities' attitudes towards solid waste management is not an easy task, and it requires continuous training, including providing materials for MSEs; iii) There was high officials' turnover. Starting from Mayer to heads of most municipal/ sector offices, there has been high staff turnover; iv) Establishing market linkages for compost production has also been challenging. When there is semi-automated compost plant, there is more compost production which requires market; v) Ensuring decision makers' willingness and commitment to secure land for greenery was very challenging as there was different understanding on the issues. The current Mayer of Addis Ababa, Mrs. Adanech Abebie (former Adama Mayer) played a significant role in facilitating this and the whole project activities and vi) Sustainably managing green areas require employing more security personnel engaged in MSEs

4.3.4 Efficiency

Project funds were managed efficiently and cost-effectively with good financial management practices. Financial management and disbursement procedures are generally followed well. The project is judged to be managed cost-effectively. Co-financing of the project through MUDC and City Administrations exceeded the expected. Monitoring systems employed by the PMU, using annual work plans and milestones, with verification by site visits, have been effective. Through green legacy, the project cost effectively used human, material, and financial resources, however, some project activities like constructing compost shed and developing a functioning recycling system was delayed due to increasing cost of construction materials, and inflation.

The municipality assigned a focal person for the project who oversees and supports day-to-day project implementation while UNDP's support was significant in providing technical and administrative support. For example, UNDP assigned Addis Ababa based SWM and UGI experts, including a manager and finance experts. These UNDP teams provided critical support for the effective and efficient implementation of the project. Innovation and research on construction of compost plant and production of compost (using a semi-automatic tractor pulled compost turner, compost fleece and digital thermometers) has been functioning. The project introduced a new way of identifying relevant seedlings for the city. Before the project, production of seedlings was done using traditional methods and number of seedlings grown was very small compared to the demand. When NAMA COMPOST project started, the municipality partnered with Debrezeit Research Institute. As a result, seedlings survival rate increased the number of seedlings produced increased from 600,000 to 4 million.

The coordination and supervision of the project by the UNDP, MUDC, City Administration and the project steering committee was efficient. Most project activities were accomplished in time within two to three years. The project provided MSEs with compost turner, fleece, and digital thermometers. This helped increase compost production, reducing labor work, and improved the quality of compost produced. MSEs monthly saved money from their income. After saving 20%, they took loans from financing institutions and bought tractors for transporting wastes while Municipal activities like solid waste collection and transportation and managing green areas are outsourced to MSEs leading cost saving by the local government.

4.3.5 Overall project outcome

The overall project outcome was based on the rating for relevance, effectiveness and efficiency of the project. Overall, the project outcome was assessed in a six-point scale as presented in the Table 11 below using established outcome ratings for relevance, effectiveness and efficiency (ANNEX K-4).

Table 11: Assessment of Project Outcomes

S/NO	Assessment of Outcomes	Rating
1	Relevance	6= Highly Satisfactory (HS)
2	Effectiveness	6= Highly Satisfactory (HS)
3	Efficiency	5= Satisfactory (S)
4	Overall project outcome rating	6= Highly Satisfactory (HS)

4.3.6 Sustainability of the project

The evaluation finding revealed that, the project is likely to be sustainable after technical cooperation between GEF/UNDP and the Government MUDC. The following are the strategies that demonstrates prospect for sustainability as informed by the KII, FGDs and desk reviews.

i. *Training and capacity development:* the project supported strengthening the capacities of existing MSEs and formation of new ones. In order to ensure project sustainability, the project created capacity through training on ISWM (source sorting, transportation, recycling, composting) and UGI (urban green infrastructure implementation approach, nursery establishment and management, tree post planting management, survival rate

counting of planted trees, and livelihoods options of afforestation/reforestation activities) have been provided to the beneficiaries. The training on how to operate compost machines will increase sustainability of the project.

ii. *Securing title deeds for composting and greeneries*: the Green areas were given title deeds that legally protected them to secure their land. The land titling will secure ownership and promote working work towards the intended outcomes. Loss of livelihood and economic impoverishment resulting in resistance by marginal groups to their removal from illegally occupied public lands such as riparian corridors, peri-urban forests and urban green spaces. This process need to be scaled up to other cities in the country.

iii. *Construction of compost sheds and rehabilitating infrastructure:* the provision of materials, machines and equipment for MSEs provides the opportunity for the city to manage solid waste and improve the Management of greeneries. MSEs have been supported by providing Personal Protective Equipment's (PPEs). However, functionality of compost sheds in Bahir Dar, Hawassa, and Dire Dawa requires supportive supervision and timely action.

iv. *Institutionalization of ISWM and UGI standards and guidelines;* the development and adoption of ISWM and UGI standards and guidelines translated into local languages. This have encouraged proper solid waste management and improved greenery practices.

v. *Market linkages of MSEs with micro finance institutions:* the project has created markets for compost and MSEs are linked with micro finance institutions to access loans. However, these linkages are still weak and need to be strengthened. Plenty of work remained in creating market linkage for participating MSEs in composting and monitoring quality of their work.

vi. *Relevance of the project in addressing the challenges of SWM and UGI:* Both ISWM and UGI approaches are the government's development priorities. There are commitments from the city administration and the regional government to make project activities sustainable. The fact that, the project is helping in cleaning the Municipalities has created ownership commitment among the city administration to support the project. The municipalities have supported the project by contributing funds as well as in-kind.

vii. *The urban agriculture sector approach:* the city and the Ministry/ bureau of agriculture play their role in buying compost from MSEs. This would benefit both MSEs and farmers who would potentially use compost, thereby ensuring the project's sustainability. However, this is at very early stage of development which needs further consolidation and work.

viii. *Linking afforestation/ reforestation activities with decent livelihood options*: MSEs engaged in such activities were trained and deployed in different sites. However, members of MSEs expected a sustainable livelihood intervention and further capacity building support is required.

ix. *Establishing carbon offset mechanism for Ethiopian Voluntary Carbon Market (EVCM):* Carbon offset mechanism has been established which is expected to be foundation and new for other climate related project at national level. However, it not only requires promoting the scheme and coordinating the work but also establishing local emission reduction verifiers and validators in collaboration with Ethiopian Environment, Forest and Climate Change Commission.

In addition, leveraging project outcome and ensuring project sustainability will be challenged by unfinished project activities such as (1) support afforestation and reforestation of 1,270ha of lands in five project cities, (2) procurement, distribution and installation of Balling machine for five cities and (3) carrying out survival rate of this year planted seedlings.

4.3.6.1 Financial

According to the ProDoc, a detailed financial model has been developed to substantiate investments in composting of urban solid waste generated by households in the 6 target cities and towns. The government of Ethiopia devaluated Birr against US dollar in 2018. As a result of the devaluation the price of construction materials has increased significantly coupled by the Increase in the cost of living which forced the operational cost to exceed the planned budget. Eventually, this caused delays in completion of the compost shade in some of the cities linked price inflation. However, since the cities have taken ownership of all project investments and are budgeting for the infrastructures like any other assets of the cities, financial sustainability was not affected. Most of the MSEs are trying to create sustainable market for their products, expanded their business and operating in full scale. Therefore, the financial sustainability will be determined by the availability of market and continued financial support by municipalities.

4.3.6.2 Environmental

This project has a strong theme of environment, so there are few environmental impacts created by project actions themselves. For example, new illegal houses are coming to exist next to Hawassa compost shade which may cause hindrance in the production due to noises or unfavorable smells the new settlers may claim. Law enforcement in Bahir Dar should be strengthened to mitigate the current risks of land grabbing by illegal settlers. Some of the major risks identified related to the project are: illegal land grabbing related to UGI, limited supply of diverse vegetation for UGI, extended drought in Mekelle, Adama and Dire Dawa, health related risks due to waste handling and processing and risk of contamination during transportation. Document reviewed showed that, there is a Sustainability Plan and Exit Strategy for the project that proposes specific actions to promote sustainability of outcomes beyond the end of the project period.

4.3.6.3 Social-political

The political instability has caused disruption of leaderships in municipalities and there is still such uncertainty which may affect future implementation for example the case of Hawassa and Melleke. People engaged in compost production and recycling are not generating income enough to lead their lives due to lack of market. This has a risk on continuation of project outcomes and results gained so far. The municipalities are therefore advised to support the MSEs in finding market for their products such as through creating linkage with NGO's that support urban agriculture, rural farming and forest development. The accumulation of wastes generated from households and institutions are mostly dumped into rivers and green areas have negative social problem on communities living in the Municipalities. However, since NAMA project came the situation of solid waste management has been improving but not completely resolved.

4.3.6.4 Institutional framework and Governance

Institutional framework and governance under the current city administration are supportive of ISWM and UGI activities. MUDC and City Municipalities are well-established government institutions in terms of its staffing and services. Their mandate is consistent with the project objectives and therefore, NAMA COMPOST project activities have the potential to become mainstreamed within cities/towns regular work plans and implemented side-by-side with planned activities. The city has experts in solid waste management and green infrastructure who manage waste and promote green infrastructure. The capacity-building support provided by the

project provides a long-term vision on how to effectively implement solid waste management and green infrastructure in the urban and peri-urban areas as is the case of Bishoftu.

The project is being operationalized through government formal institutions. The regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems. The project has put significant time and resources to identify the right institutions as the main stakeholders and established steering and technical committees to steer and guide the implementation according to the project document. Framework conditions such as adoption of standards in composting as well as UGI will increase sustainability for the ISWM.

4.3.6.5 Overall likelihood of Sustainability

The financial, socio-economic, environmental, institutional framework and governance risk that may affect sustainability of the project exists. These risks have been identified and are being addressed using the Sustainability Plan and Exit Strategy already in place. Overall, the sustainability of project Outcomes rate was assessed in a four-point scale as presented in the Table 12 below using established Ratings for Sustainability (ANNEX K-3).

Table 12: Assessment of Project Sustainability

S/NO	Sustainability	Rating
1	Financial	4= Likely (L)
2	Environmental	4= Likely (L)
3	Social-political	4= Likely (L)
4	Institutional framework and Governance	4= Likely (L)
5	Overall likelihood of Sustainability	4= Likely (L)

4.3.7 Country Ownership

The city administration adopted and has been using ISWM and UGI guidelines and tools. The project outcomes are already incorporated into the city and the region development plans while relevant stakeholders from city administration took part in project implementation, monitoring, and evaluation of project. The cities are represented by Mayor or his representative in national Steering Committee meetings. The cities have adopted key documents of the project like ISWM and UGI standards and tools. These documents have been approved and incorporated into the city development plans.

4.3.8 Gender equity and Women Empowerment

Socio-economic benefits and services for women: NAMA COMPOST project addressed the socio-economic benefits and services for women and men. For instance, a total of 68,051 jobs have been created so far as a result of project intervention. Out of this 45,596 jobs have been created during the reporting period with 56% women in ISWM of 17,468 (16,556 temporary, 912 permanent) and 54% women in UGI of 28,128 (26,312 temporary, 1,816 permanent).

Gender inequalities and different needs of men or women: The findings from the document review showered that, the manual compost production used was too laborious, and it limited and excluding women to participate in this area of operation because women were left only to do collection of waste which forces them to spend more time than men because they have to be at

work throughout the week while men are supposed to work on compost only three days a week. To address this gender discrimination, the project procured a semi-automatic composting machine that has narrowed this gap.

Jobs created for women by the project: Women were the most significant beneficiary of this project. They accounted for more than 55% of the job created because of the project. They took part in different training and awareness creation activities. They were also provided with essential equipment to run their solid waste collection and compost production work.

Training and capacity building of women: Women were provided with different trainings on entrepreneurship skills, life skill, income generating activities (bee keeping, urban agriculture, urban nursery, vegetable and fruit tree planting, and ecotourism practice). Additionally, safety materials and working tools/equipment (glove, mask, waste transportation truck, nursery tools, tree seedling plantation tools, boot, over coat, etc.) provided.

Level of Women's participation in the project: Women actively participated in SWM activities, and in some MSEs, they engaged in leadership roles. Women participation has impact on their family meeting the basic needs and improving their standard of living. They accounted for more than 55 - 60% of the total members of SMEs; especially, in waste collection. Women got employment opportunities and increased their income sources. As members of MSEs, women took part in trainings, solid waste collection and disposal, compost production and greenery. The COMPOST project improved gender equality and women's empowerment in the project's capacity through the creation of employment opportunities in ISWM as well as UGI initiatives.

Women access to Micro-financial Institutions: Women were able access the services from the MSEs accessing finance from Micro Finance Institution. The table below shows the number of women associated with MSE' in the city administration. This indicates that, more women participated in MSE; and were able to get credit facilities. The details on women access to MFI 's in the cities by gender is presented in Table 13 below.

Table 13: Number of MSEs accessing MFI with a focus on gender equality

City Administration	No of MSE		No of Female		No of Male		Total Jobs Created		No of Youth		No of MSEs accessing finance from Micro Finance Institution	
	UGI	ISWM	UGI	ISWM	UGI	ISWM	UGI	ISWM	UGI	ISWM	UGI	ISWM
Adama	6	6	1,196	78	798	33	1,994	111	1,595	78	6	6
Bahir Dar	19	6	1,267	52	845	24	2,112	76	1,690	61	19	6
Bishoftu	7	6	1,325	54	713	18	2,038	72	1,630	64	7	6
Dire Dawa	8	7	70	39	57	32	127	71	102	53	8	7
Hawassa	7	13	1,296	48	864	22	2,160	70	1,730	48	7	13
Mekelle	3	5	1,015	20	797	30	1,812	50	1,450	40	3	5
Total	**50**	**43**	**6,169**	**291**	**4,074**	**159**	**10,243**	**450**	**8,197**	**344**	**50**	**43**

Source: Project Office

4.3.9 Cross-cutting issues

The findings from the KII revealed that, NAMA COMPOST project has mainstreamed a number of UNDP cross- cutting issues into the project implementation. These are:

i) Knowledge management: The project staff produced a documentary film on project success stories and good practices which was showed in a stakeholders' meeting in Adama. In this workshop, government leadership from federal, regional and city participated and watched the video. Following that film, participants asked different questions and discussed on how to replicate good practices gained so far and scale up project interventions. The workshop was concluded by promising to look for options for project replication and scaling up. The film and workshop outcomes were broadcasted through Fana Broadcasting Corporation, a well know media and posed on the Website of the Ministry of Urban Development and Construction. In addition to this, the project has advertised a bid to procure a production firm to produce a better film by professionals and compile project best practices which will be broadcasted on different tradition media and social media. ii) *Poverty Alleviation:* The project is addressing issues of livelihoods and income generation. Selling of compost and solid wastes has become a major source of income. The promotion of urban agriculture where city dwellers can grow mangoes, vegetables is addressing food security. iii) *Climate change Mitigation and Adaptation:* establishing tree nurseries and planting trees through the greenery helps in control of soil erosion, floods and act as wind breaks.

4.3.10 Progress to Impact

The NAMA COMPOST project was designed and implemented with an objective of promoting greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in six Ethiopian cities and towns (Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle) for a period of five years. Since the start of project implementation in 2017, remarkable achievements have been recorded in ISWM, UGI, GHG emission reduction and job creation. At the end of the project on 31st March 2022, the project it is expected to result in annual emission reductions from UGI initiatives and ISWM equal to approximately 306,000 and 132,321 tCO2e, respectively. These will accrue from the annual generation of 45,500 tons of compost from 152,000 tons of household organic waste, and the reforestation of 33,000 ha of degraded land by the end of the 5-year project lifetime.

Since the start of project implementation in 2017, remarkable achievements have been recorded in ISWM, UGI, GHG emission reduction and job creation. The project has rehabilitated 31.871.96 (96%) ha of urban and peri-urban degraded area of its target and the amount of compost produced so far in the last five years is 109,220.70 (90%) of the target. The total CO2 emission reduced as a result of the project is 413 kilo tons Co2 (with 293 kilo tCo2 from UGI and 120-kilo tons Co2 from ISWM) interventions. The project has created a total of 68,051 jobs to people in the six project intervention areas. Out of this 45,596 jobs have been created during the reporting period, 17,468 (16,556 temporary, 912 permanent; 56% women) in ISWM and 28,128 (26,312 temporary, 1,816 permanent; 54% women) in UGI. All the two standards (UGI and ISWM) have been transposed to the cities. During the reporting period, a total of 123,226 households have been practicing source sorting (324,282 households so far. A total of 127 MSEs (55 in ISWM and 72 in UGI) have been established and trained on ISWM-UGI value chain in the last four years and more support has been given to the MSEs with working tools and equipment (PPEs).

So far MSEs have earned USD 2,554,743.13 from both activities since 2017. Construction of six composting sheds has been already completed and MSEs engaged in compost production outside of the sheds are supported. A total of 19,410.27 ha of land has been reforested in the project cities during the reporting period. The total progress of afforestation/reforestation activities in four year is 31,871.96ha. A total of 72 MSEs (11 MSEs during the reporting period) have been screened and trained in plantation of trees and management. The MSEs are engaged in alternative livelihood activities in the afforested areas of after signing MoU with the cities. The project has built capacity of federal and local government units and established system for better waste management and urban greenery development.

Environmental Impact

The change seen in waste segregation and proper disposal of waste has resulted in positive environmental impact through reducing illegal damping of waste by households and reducing the difficulty municipalities had to separately treat the waste according to its nature. Moreover, the introduction of both composting and recycling have improved waste collection rate in the cities which has positively impacted the environment. For example PET water bottles used to be the biggest problem of the cities by blocking drainage canals and rivers causing flooding in the city. Water pond of Adama and Lake Hawassa were full of such kind of plastic bottles. Since the start of waste recycling business however, such type of wastes are no more a problem because the MSEs and scavengers collect and sale them to earn income.

Composting and urban/peri-urban greening is contributing to GHG emission reduction and by diverting the organic fraction of waste from land fill which otherwise would emit CH4 to pollute the air and sequestering CO2 respectively. It also protects environmental pollution by using compost as replacement to chemical fertilizers for urban greening. The project has achieved a total of 128,089 tons of CO2 emission reduction so far from both the greenery and composting activities. The soil and water conservation structures built and the increase in vegetation cover as a result of area closure and tree plantation on cliffs surrounding the cities has retained the top soil from erosion that again is creating favorable condition for more vegetation to regenerate. The result is positive and considerable impact on the environment through carbon sequestration, protection of biodiversity, protecting land degradation and maintaining ecosystem services of the areas. Lake Hawassa of Hawassa city, Lake Tana of Bahir Dar, rivers such as Blue Nile and Awash to which rivers from those cliffs surrounding the cities drain were being affected by siltation as a result of soil erosion and landslides in these areas. The gullies and degraded areas are now rehabilitated that defiantly has reduced siltation on those water bodies caused by extreme flooding mainly during raining season. Trees planted by the community in their compounds, road sides, parks and areas surrounding the cities are contributing to prevention of extreme heat and hence enhancing urban resilience to the impact of climate change in the six cities.

The project is using different mechanisms such as creating different types of administration mechanisms like community, MSEs and organizations; securing title deed for the areas; making the local community beneficiary as well as mobilizing stakeholders to ensure the urban and peri-urban greenery areas are rehabilitated, well managed and sense of ownership is created. This has an impact on sustainable protection of the environment including the biodiversity in the six cities. Three new plant nursery sites have been established in three cities and seedling raising capacity of two nursery sites have significantly increased. Moreover, the cities have been providing seedlings to the community for free and to a recent government initiative of 10

Billion tree plantation program. It is concluded that this has defiantly increased forest coverage in the cities as well as surrounding areas that contributes to environmental protection.

Community Park (left) and City Park (Right) Hawassa

Socio-economic Impact

Flooding caused by surface runoff is decreasing in the cities as a result of the water and soil conservation structures built on the cliffs surrounding the cities and the increase in vegetation resulting from areas closure and tree plantations. This is a quote from the assessment report-City Beautification and Greening Bureau Team Leader of Adama said “we have never experienced heavy rain as of last summer. But there was no much flooding in the city. Prior to the start of project intervention, small rain was enough to create huge flood on roads and slum areas in our city”. This project has reduced damages on city infrastructure such as roads, ditches and water pipe lines as well as houses caused by flooding which ultimately has reduced maintenance costs of the government and negative consequences on community livelihood.

The national "5 billion seedling planting program" has supported project effort in greenery development. The project contributes for urban food security and CRGE hence, it integrates different initiatives from different organizations. As a result government higher officials’ attention and political commitment for successful implementation of the project is high. Moreover, the procurement of composting machines which is well advanced has enhanced the production of compost in both quantity and quality that has enhanced cities’ attention to project outcomes. The cities are now experiencing low flooding and colder weather as compared to pre-project intervention as a result of the urban and peri-urban afforestation and trees planted on road sides, parks and individual compounds as discussed previously in this report. This is a feeling from the discussion we had in different cities mainly in Dire Dawa and Adama. This is a good indicator in that the project is contributing to building resiliency capacity of the urban community in the six cities to extreme weather conditions such as flooding and high heat caused by climate change.

Following the establishment of three new plant nursery sites and increase in seedling raising capacity of two nursery sites, the city administrations have been providing seedlings to the community for free. Moreover, selected model villages in the six cities have been supported to green their neighborhood and some urban greenery areas have been given to the community for administration and use. All these project efforts have contributed towards community attitudinal change and enhancing community understanding on benefits of greening the environment that has resulted in actual observable changes in these cities; green compound and surroundings. Some of the rehabilitated areas and areas given to the MSEs for plant nursery were illegal waste

dumping sites and two of them were open landfills that people used to avoid passing through and living closer to these places. After rehabilitation however, these places are no more considered as health treats rather are used by the community to conduct special occasions such as social gatherings, wedding and graduation ceremony and value of land and rental price of houses close to these areas has increased.

Rehabilitated waste damping area Bishoftu

The project has introduced compost production technology from municipal solid waste and scaled it up the past four years. Though there were few people engaged in collection and sales of recyclable waste in Adama and Bishoftu, the project has expanded the activity and replicated the practices to the other four cities of the project sites. Six composting sheds have been established in the six cities and all the sheds are constructed within the landfills except for Adama which is constructed at the outskirt of the city. The lands on which the sheds are constructed were not neither settled nor used by anyone prior to construction. There was no any complain formally filled during construction and operation of these landfills.

Positive impact of the Project

The implementation of ISWM and UGI development interventions in the six cities, has led to a number of positive observed and potential impacts, these are;

- The rehabilitated and afforested/reforested peri-urban areas have reduced rapid runoff of rain water preventing soil erosion that protected damage on infrastructure, reduced flooding of residential areas and its impact on community livelihood, serve as wind break, its cooling effect on the weather and contributing to climate change mitigation efforts through sequestration of CO_2.
- The rehabilitated illegal waste dumping sites have reduced health risk on people living around and passing through those areas while at the same time increase land value the surrounding places.
- The awareness creation efforts, distribution of plant seedlings for free and enhancing seedling raising capacity of the cities has brought attitudinal change and enhanced greening practice of the municipalities and the community. As a result, private and business compounds, neighborhoods, peri-urban areas, city parks, road medians and city peripheral areas in the six cities are now greener as compared to four years back. People are witnessing change in weather condition as a result in the six cities expressed as cooler and less windy compared to previous years.

- Efforts done towards improvement of waste management practices of the cities, community awareness raising on waste handling, introduction of waste recycling and composting business and trainings of staff and leadership of the municipalities including exposure to well advanced cities has resulted in better waste management in the six cities. This lowers environmental pollution including water, reduces GHG emission from landfill and results in better community health and satisfaction.
- Permanent and temporary jobs created in seedling raising, land rehabilitation, afforestation and reforestation activities, along the value chain of waste management, composting, Waste recycling and other economic activities has contributed to livelihood improvement of people engaged in these businesses.
- The project has introduced mechanisms like entitlement of clear and legal boundary, introduction of different management system such as community, government, companies and MSEs, fencing and introducing community benefit schemes to the greenery areas to ensure better protection and sustainability of the sites.

Summary of progress on achievements towards long term impact of the project.

- Strengthening capacity of stakeholders
- Securing title deeds for greeneries
- Improved livelihoods of people through job creation
- Developing ISWM and UGI standards and tools.
- Protecting and conserving Lake Hawassa.
- Improvement in solid waste production and proper disposal
- Using compost for greenery,
- Adequately managing urban greening sites,
- Most of the cities are now clean
- Reducing, recycling and reusing plastic wastes.
- Compost production and marketing
- Rehabilitation of the park which had been turned from dumping site
- Green legacy mobilized a range of stakeholders in planting trees
- Adama's climate is changing from desert to semi-desert over 3 years.
- Re-afforestation and environmental protection has reduced risk of floods.
- Regeneration of biodiversity in urban and peri-urban green areas.
- Improved practices of soil and water conservation practices
- Improved knowledge, attitude of the community in ISWM and UGI
- Contribution to GHG emission reduction
- MSEs became entrepreneurship in landscape planning and urban greenery practices.

Negative/unintended impact of the Project

Despite of the positive impacts realized by the project, the TE team has identified a number of unintended negative environmental and socio-economic impacts of project intervention in the six cities, these are:

- As compost production increases and its application on farming starts, there is possibility to affect community health and pollute surface and underground water for which we have recommended to construct leachate ponds according to the standard (Adama, Dire Dawa, Bahir Dar and Mekelle), enforce waste segregation at source and separate transportation and continuous laboratory taste on compost.

- MSEs engaged in solid waste management, composting, and recycling are not adhering to the OHS measures that could potentially affect their health. The city administration should take measures on those who are not obedient to the safety rules.
- The MSEs engaged in composting and recycling business are not generating enough income to support their life due to lack market for their product and hence have doubt to stay in the business. Hence, the municipalities, who are going to take over the activities following project phase out, support MSEs in finding more market mainly by creating linkage with urban/rural agriculture and environmental protection agencies.
- Trespassing legal boundary of some greenery areas, mainly in Hawassa and Dire Dawa by illegal settlers is observed and government is not taking measure to reverse the situation being afraid of social unrest. The municipalities need to regularly check and enforce the law before more and more people entered the greenery areas that might worsen the situation.
- The major risks related to the project are illegal land grabbing related to UGI, limited supply of diverse vegetation for UGI, extended drought in Mekelle, Adama and Dire Dawa, health related risks to waste handling and processing, sustainability due to poor income generation of UGI, market problem for compost and risk of contamination during transportation.

5.0 MAIN FINDINGS, CONCLUSIONS, RECOMMENDATIONS & LESSONS LEARNED

5.1 Main findings

Project design/formulation

The project document and the results framework are aligned with the National priorities and Country driven-ness in addressing the key development challenges of of ISWM and UGI. This is in line with the The Ethiopian Climate Resilient Green Economy Strategy (CRGE) that has recognized the need for creating modern and clean cities and Ethiopia Growth and Transformation Plan-2 (GTP II) that has ambitious plan of producing organic compost by farming community. The findings revealed that, project activities, outputs, indicators and objectives are clear in the results framework. The project outputs and indicators are well articulated and linked with the ISWM and UGI approaches addressing the broader city development issues and international environmental challenges SWM and UGI.

Indicators were SMART and there is a clear link between the problem analysis and the proposed solutions and assumptions were relevant to the achievement of the Ethiopia NAMA COMPOST Project. There is evidence that the Annual Work Plan for 2020 was planned through full participation from local level to Ministry level. Then final work plan was presented to the Project Steering Committee and anonymously endorsed by members. The AWP was then implemented by the six project cities through coordinating experts from different departments of the municipalities. The project made linkages with other projects to rein-force interventions, and value and avoid duplication. For instance, NAMA worked with other projects implemented by the World Bank, GIZ and UN-Habitat.

The project management arrangements were adequate and effective in providing necessary to Project Steering Committee (PSC) and Project Management Unit (PMU) towards project objectives and in oversight/ monitoring and evaluation with prospects for improved performance. The project was implemented following UNDP's National Implementation Modality (NIM)) between UNDP Ethiopia Country Office and the Government of Ethiopia, and

the Country Programme Action Plan (CPAP). The Implementing Partner (IP) for this project is the Ministry of Urban Development and Construction (MUDC).

Project Implementation

Similarly, the greenery areas of the cities were shifted to unsettled areas to avoid resettlement related problems, cash co-financing was introduced following cost inflation in shed construction and construction of 6 sheds instead of 2 was agreed. The project steering committee made critical strategic decisions and amendments based on new and emerging needs. For instance, in the procurement of compost turner and transport facilities, compost fleece, and digital thermometers and allocated budget to pay salaries for MSEs members as a way of cushioning them due to COVID-19 lockdown, this helped them to continue working on SWM activities.

The project adopted an inclusive approach has continued during implementation, with the partnerships that have been developed between the project and regional, woredas and kebeles government agencies and with city administration and MSEs at the local level stages of project implementation. All cities, MoF, EFCCC, and ESA are involved during AWP development and approval. The project was co-financed by different organizations both in cash and in-kind. The city administration allocated budget and other resources by providing human resources, offices and office supplies, vehicles, and land for sheds' construction, allocating land for greenery, staff time, office space, equipment and compost production and financing project activities.

The Overall quality of M&E was **rated as Satisfactory (5= S).** The overall assessment of the monitoring and evaluation shows that, pprocedures have been followed correctly, and recommendations from the MTE were implemented. As part of the Monitoring and evaluation (M&E) plan, independent external evaluators have been engaged for both project mid-term and terminal evaluations. Reporting of the project progress has occurred in its Quarterly and Annual Reports which are prepared by the Project Manager and shared with the PSC.

Overall project implementation/Oversight and Execution was **rated as Highly Satisfactory (6= HS).** The implementing partners (MUDC and the six cities) are committed to respond to the needs of the city dwellers in the management of waste as well as increasing the greenery to make the cities habitable. The current PMU based at MUDC has done a thorough and effective job of project management and administration since their recruitment, with regular monitoring of the work of the partner organizations and other project support provided by the UNDP CO.

The findings from document review show that, there have been some risk identification and mitigation measures despite little risk reporting. For instance, sheds raised by the cities have leachate collection ponds but were constructed to avoid social risks. The project has used different strategies to minimize potential negative impacts during implementation such as intervening in areas where there are settlements to avoid displacement of people, construct the sheds within landfills for which EIA is already conducted to avoid environmental impact of composting, provide OHS trainings and materials to MSEs engaged in economic activities along the value chain

The COVID-19 pandemic negatively affected MSEs and the livelihoods of the beneficiaries. The sales stopped, the compost was closed and there was no market for the MSEs, a situation which made it difficult for them to continue with operations. They were disintegrated because they could not pay salaries for their staff working on the project which affected implementation

of project activities affected the plastic waste market leading to reduced MSEs' income. There was no market for collected, crushed, and packed plastic wastes that led to production of wastes scattered at different places during lockdown.

In response to COVID 19 in five cities, the project used additional funding secured from UNDP to support the municipalities in cleaning illegal dumping sites mainly river banks found within the center of the cities and converted them into nursery sites and youth recreational areas through MSEs who provide coffee services and sale seedlings. In cities like Adama and Dire Dawa, their exposure for flooding has reduced significantly due to the terracing constructed for the seedlings and improved management of the land. Individuals are motivated to manage their gardens by planting fruits and vegetables, especially during the COVID-19 pandemic.

To mitigate impact of COVID-19 pandemic on MSEs and their staff, the Project Steering Committee requested US$ 150,000 from UNDP as a risk-mitigating strategy to pay MSEs their salaries in order to make them survive and ensure that project activities do not stop. Reprogramming of some money from UNDP was done to support MSE's so that they can buy and sell using the market-based approach.

Project Results and Impact

Table 8 presents an analysis of the progress towards objectives and output achievements based on indicated developed in the ProDoc. The progress towards achievement of overall project objective and expected outcomes was evaluated according to the UNDP-supported GEF-financed projects evaluation guidelines. The TE assessed the extent to which expected outcomes were achieved against set indicators, and how expected outputs were delivered by updating and providing comments on the results framework of the project.

The evaluation on progress towards Objectives and Expected Outcomes was **rated Highly Satisfactory (6= HS)** in 10 out of 14 indicators, while 4 indicators 4 were rates as rated as **Satisfactory (5= S).** The following are the four indicators that were rated Satisfactory, the rest were rated **Highly Satisfactory. Indicator 1**: Direct project CO2 emission reductions from the range of interventions proposed by the project, kilo tonnes CO2, **Indicator 2**: Cumulative weight of organic waste diverted from landfills for composting, from the project objective and **Indicators 2.3** : Number of established voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives from outcome 2 and **Indicator 4.3:** Number of hectares of reforested degraded land supported by compost-grown seedlings produced by nurseries from outcome 4 were rated **Satisfactory (5= S).**

Relevance

The NAMA COMPOST project is well placed within the local context and contributes to SDGs 8, 11, 13, and 8. Through the implementation of a Nationally Appropriate Mitigation Action component of outcome 3, it directly supports the UNDAF Outcome 5 i.e., key government institutions at federal and regional levels, including cities, are able better to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable resource management. The strengthening the regulatory and legal framework and institutional coordination mechanisms to integrate ISWM and UGI within urban systems under outcome 1 supports strategic objective of Ethiopian government's Urban Development and Micro and Small Enterprises Development Strategy Growth and Transformation Plan (GTP) in Ethiopia.

The project is in line with alignment with international frameworks such as the UNFCCC's; UNDAF outcome 2: (private-sector driven industrial and service sector growth is increasingly inclusive, sustainable, competitive and job-rich), outcome 5: (key Government institutions at federal and regional levels, including cities, are able better to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable resource management) and outcome 13: (national and subnational institutions apply evidence-based, results-oriented and equity-focused decision-making, policy formulation, programme design, monitoring, evaluation and reporting.) The project perfectly fits with Ethiopia's sustainable development strategies, including the CRGE Strategy, the second phase of its Growth and Transformation Plan (GTP) as well as its Urban Development and its Micro and Small Enterprises Development Strategy. Finally, it involved main stakeholders at federal, regional and city administration levels were effectively consulted during the design phase of the project

Effectiveness

The development objective of the NAMA COMPOST project was to promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector. The project objective was to promote significantly greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector. The project to a great extend has promoted greater use of SWM and UGI approaches. Although it has not achieved 100%, but 10 indicators out of 14 had been achieved. The remaining 4 are likely to be attained if there is continued political and stakeholder commitments. The project implementation has achieved and exceeded some of the targets. This achievement has been contributed by factors such as The factors that contributed to achievement of outcomes and outputs are: the commitment of the implementing partners (MUDC, and the six cities) and UNDP in responding to the needs of the city dwellers in the management of waste and increasing the greenery the cities; The passionate Government Minister who and mobilized people on greenery to plant over 5 billion trees; Financial support from GEF/UNDP and strong Co-financing; Ownership of the project by the members including the beneficiaries; Coordination, supervision and management of the project by the PMC, Project Manager, PMU and city administrators; increased awareness creation of stakeholders to work in steering and technical committees to steer and guide the implementation and support the project; the job creation component of the project that is very attractive to the members; innovative problem solving of SWM and UGI to the municipalities and cleaning and greening the cities.

Assessment of Outcome 1: The project succeeded to create a regulatory and legal framework, institutional and coordination mechanisms, and tools for supporting the national policy environment. This was specifically essential for integrating ISWM and UGI within urban systems in the six cities – Hawassa, Adama, Bishoftu, Bahri Dar and Dire Dawa. The main tangible results under this component are transposing ISWM and UGI standards to the cities and enabling them to use the standards. The interviewed beneficiaries in cities expressed their satisfaction with UNDP and MUDC inputs for the capacity building workshops in the standards transposing process. The transposing process passed through multiple stages: reviewing of the existing national standard, providing trainings, supporting cities to adopt the standards into their context and ensuring decision makers' endorsement. The comprehensive standards' transposing

component under output 1 has built a foundation for institutional improvements which enhanced service delivery and complements Outputs 1.2, 1.3 and 1.4.

Assessment of Outcome 2: The COMPOST project was instrumental for establishment and functioning of MSEs for ISWM-UGI value chain for the six project cities. As a result, MSEs developed the capacity to produce compost and earned income through compost selling to public institutions. On the contrary, public institutions in the city administrations and MSEs engaged in nursery business and afforestation/ re-afforestation activities had easy access to MSEs compost product for their greenery activities. Long term contracts were signed between different companies and MSEs both for compost and non-organic recyclable wastes sales contract. The project promoted compost and recyclable waste through contacting potential buyers via project management staff and recruited consultant. However, the project failed to establish voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives. This negatively impacted compost producers' production and marketing potential.

Assessment of Outcome 3: With the objective of facilitating NAMA development and implementation, this outcome is achieved through developing standard baselines for calculating emission reductions. The standard baselines established for the six cities include: (i) compost production using the organic fraction of landfill waste; (ii) urban and peri-urban reforestation of degraded land; and (iii) displacement of non-renewable fuel wood with renewable biomass generated by managed forests. Under this outcome, the project was developed and submitted to the UNFCCC NAMA Registry with the goal of: (a) providing robust and credible MRV for the GEF-financed project, and (b) scaling-up the project beyond the geographical boundaries being supported by the GEF. Registration of the population of the 6 cities/towns Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle covered by the project in the UNFCCC NAMA registry is on final stage. The necessary document was prepared and approved by the national approver.

Assessment of Outcome 4: The construction of six composting sheds and equipping them with essential facilities improved both the quantity and quality of compost production. The total annual compost production capacity of the cities reached more than 45,000 tones/ city. A total of 109,220.7 tons of compost were produced from 363,704.93 tons of organic waste in the project period. Most importantly, the effectiveness of this project is manifested through linking composting and urban/peri-urban greening, contributing to GHG emission reduction and by diverting the organic fraction of waste from land fill which otherwise would emit CH4 to pollute the air and sequestering CO2 respectively. It also protected environmental pollution by using compost as replacement to chemical fertilizers for urban greening. The project has achieved a total of 109,220.7 tons of CO2 emission reduction both the greenery and composting activities.

The factors that contributed to achievement of outcomes and outputs are: the commitment of the implementing partners (MUDC, and the six cities) and UNDP in responding to the needs of the city dwellers in the management of waste and increasing the greenery the cities; The passionate Government Minister who and mobilized people on greenery to plant over 5 billion trees; Financial support from GEF/UNDP and strong Co-financing; Ownership of the project by the members including the beneficiaries; Coordination, supervision and management of the project by the PMC, Project Manager, PMU and city administrators; increased awareness creation of stakeholders to work in steering and technical committees to steer and guide the implementation and support the project; the job creation component of the project that is very attractive to the

members; innovative problem solving of SWM and UGI to the municipalities and cleaning and greening the cities.

A number of challenges ware encountered during implementation which are: i) high officials' turnover starting from Mayors of most municipalities; ii)Increasing cost of construction materials due to inflation in the country; iii) Accessing and transporting sorted wastes like biodegradable, iv) changing communities' attitudes towards solid waste management is not an easy task, and it requires continuous training, including providing materials for MSEs; v) Establishing market linkages for compost production has also been challenging. When there is semi-automated compost plant, there is more compost production which requires market; vi) Ensuring decision makers' willingness and commitment to secure land for greenery was very challenging as there was different understanding on the issues and vi) Sustainably managing green areas require employing more security personnel engaged in MSEs

Efficiency

Project funds were managed efficiently and cost-effectively with good financial management practices. Financial management and disbursement procedures are generally followed well. The project is judged to be managed cost-effectively. Co-financing of the project through MUDC and City Administrations exceeded the expected. Monitoring systems employed by the PMU, using annual work plans and milestones, with verification by site visits, have been effective. Through green legacy, the project cost effectively used human, material, and financial resources, however, some project activities like constructing compost shed and developing a functioning recycling system was delayed due to increasing cost of construction materials, and inflation. The coordination and supervision of the project by the UNDP, MUDC, City Administration and the project steering committee was efficient. Most project activities were accomplished in time within two to three years. The project provided MSEs with compost turner, fleece, and digital thermometers. This helped increase compost production, reducing labour work, and improved the quality of compost produced.

Overall project outcome

The overall project outcome was based on the rating for relevance, effectiveness and efficiency of the project. Overall, the project outcome was **rated as 6= Highly Satisfactory (HS)**

Sustainability

The evaluation finding revealed that, the project is likely to be sustainable after technical cooperation between GEF/UNDP and the Government MUDC. This is because of Training and capacity development, Securing title deeds for composting and greeneries, Construction of compost sheds and rehabilitating infrastructure, Institutionalization of ISWM and UGI standards and guidelines, Market linkages of MSEs with micro finance Institutions, Relevance of the project in addressing the challenges of SWM and UGI and utilization of urban agriculture sector approach where the city and the Ministry/ bureau of agriculture play their role in buying compost from MSEs. This would benefit both MSEs and farmers who would potentially use compost, thereby ensuring the project's sustainability.

Overall likelihood of Sustainability

The financial, socio-economic, environmental, institutional framework and governance risk that may affect sustainability of the project exists. These risks have been identified and are being

addressed using the Sustainability Plan and Exit Strategy already in place. Overall, the sustainability of project Outcomes rate was rated at **4= Likely (L).**

Country Ownership
The city administration has already adopted and has been using ISWM and UGI guidelines and tools. Project outcomes are already incorporated into the city and the region development plans. Relevant stakeholders from city administration took part in project implementation, monitoring, and evaluation of project. The city is represented by its Mayor or his representative in national Steering Committee meetings. The city have adopted key documents of the project like ISWM and UGI standards and tools, and the ISWM and UGI have been approved and has already been incorporated into the city development plans.

Gender equity and Women Empowerment
The gender inclusion and empowerment was strong in the project. This was evident by socio-economic benefits and services for women such as jobs created where out of this 45,596 jobs have been created during the reporting period with 56% women in ISWM of 17,468 (16,556 temporary, 912 permanent) and 54% women in UGI of 28,128 (26,312 temporary, 1,816 permanent); training and capacity building of women; level of women's participation in the project; women access to micro-financial institutions and how gender discrimination was addressed where the project procured a semi-automatic composting machine that has narrowed this gap.

Cross-cutting issues
The project has mainstreamed to a very great extend the knowledge management and communication with production of staff documentary film on project success stories and good practices which was showed in a stakeholders' meeting in Adama. In this workshop, government leadership from federal, regional and city participated and watched the video. Following that film, participants asked different questions and discussed on how to replicate good practices gained so far and scale up project interventions. The film and workshop outcomes were broadcasted through Fana Broadcasting Corporation, a well know media and posted on the Website of the Ministry of Urban Development and Construction.

Progress to Impact
The NAMA COMPOST project was designed and implemented with an objective of promoting greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in six Ethiopian cities and towns (Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle) for a period of five years. Since the start of project implementation in 2017, remarkable achievements have been recorded in ISWM, UGI, GHG emission reduction and job creation. At the end of the project on 31st March 2022, the project it is expected to result in annual emission reductions from UGI initiatives and ISWM equal to approximately 306,000 and 132,321 tCO2e, respectively. These will accrue from the annual generation of 45,500 tons of compost from 152,000 tons of household organic waste, and the reforestation of 33,000 ha of degraded land by the end of the 5-year project lifetime.

Since the start of project implementation in 2017, remarkable achievements have been recorded in ISWM, UGI, GHG emission reduction and job creation. The project has rehabilitated 31,871.96 (96%) ha of urban and peri-urban degraded area of its target and the amount of compost produced so far in the last five years is 109,220.70 (90%) of the target. The project has

created a total of 68,051 jobs to people in the six project intervention areas. Out of this 45,596 jobs have been created during the reporting period, 17,468 (16,556 temporary, 912 permanent; 56% women) in ISWM and 28,128 (26,312 temporary, 1,816 permanent; 54% women) in UGI. All the two standards (UGI and ISWM) have been transposed to the cities. During the reporting period, a total of 123,226 households have been practicing source sorting (324,282) households so far. A total of 127 MSEs (55 in ISWM and 72 in UGI) have been established and trained on ISWM-UGI value chain in the last four years and more support has been given to the MSEs with working tools and equipment (PPEs).

So far MSEs have earned USD 2,554,743.13 from both activities since 2017. Construction of six composting sheds has been already completed and MSEs engaged in compost production outside of the sheds are supported. A total of 19,410.27 ha of land have been reforested in the project cities during the reporting period. The total progress of afforestation/reforestation activities in four year is 31,871.96ha. A total of 72 MSEs (11 MSEs during the reporting period) have been screened and trained in plantation of trees and management. The MSEs are engaged in alternative livelihood activities in the afforested areas of after signing MoU with the cities. The project has built capacity of federal and local government units and established system for better waste management and urban greenery development.

5.2 Conclusions

Conclusion on Project Objective: Promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector.

The project objective was to promote significantly greater use of Integrated Solid Waste Management and Urban Green Infrastructure approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector. The project to a great extend has promoted greater use of SWM and UGI approaches. Although it has not achieved 100%, but 10 indicators out of 14 had been achieved. The remaining 4 are likely to be attained if there is continued political and stakeholder commitments. The project implementation has achieved and exceeded some of the targets.

This achievement has been contributed by factors such as the factors that contributed to achievement of outcomes and outputs are: the commitment of the implementing partners (MUDC, and the six cities) and UNDP in responding to the needs of the city dwellers in the management of waste and increasing the greenery the cities; The passionate Government Minister who and mobilized people on greenery to plant over 5 billion trees; Financial support from GEF/UNDP and strong Co-financing; Ownership of the project by the members including the beneficiaries; Coordination, supervision and management of the project by the PMC, Project Manager, PMU and city administrators; increased awareness creation of stakeholders to work in steering and technical committees to steer and guide the implementation and support the project; the job creation component of the project that is very attractive to the members; innovative problem solving of SWM and UGI to the municipalities and cleaning and greening the cities.

Conclusion on Outcome 1: Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems.

The project succeeded to create a regulatory and legal framework, institutional and coordination mechanisms, and tools for supporting the national policy environment. This was specifically essential for integrating ISWM and UGI within urban systems in the six cities – Hawassa, Adama, Bishoftu, Bahri Dar and Dire Dawa. The increased community ownership and sustainability of project interventions in solid waste management and UGI, guidelines, manuals and model MoU were developed, and cities have already been using them. However, the project did not achieve development of Resettlement Action Plan for illegal settlers. Two issues are worth mentioning: (1) project activities were implemented in areas where there were less settlements with the objective of avoiding resettlement related tensions, and (2) the political situation and ongoing administration challenges hampered implementation of RAP.

Conclusion on Outcome 2: A market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilisation.

The COMPOST project was instrumental for establishment and functioning of MSEs for ISWM-UGI value chain for the six project cities. As a result, MSEs developed the capacity to produce compost and earned income through compost selling to public institutions. On the contrary, public institutions in the city administrations and MSEs engaged in nursery business and afforestation/ re-afforestation activities had easy access to MSEs compost product for their greenery activities. Long term contracts were signed between different companies and MSEs both for compost and non-organic recyclable wastes sales contract. The project promoted compost and recyclable waste through contacting potential buyers via project management staff and recruited consultant.

However, the project failed to establish voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives. This negatively impacted compost producers' production and marketing potential. There is a problem of market for SME; The market linkage so far was mainly dependent upon buyers from government institutions. Private sector and farmers used chemical fertilizers and their involvement in the compost market requires more work. In addition, sustainability of MSEs varied across cities. For example, compost producing MSEs in Adama were more experienced and started selling their products to big private companies whereas MSEs in Bahir Dar were organized quiet recently seeking more support and follow up.

Conclusion on Outcome 3: A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions.

The standard baselines were established for the six cities include: (i) compost production using the organic fraction of landfill waste; (ii) urban and peri-urban reforestation of degraded land; and (iii) displacement of non-renewable fuel wood with renewable biomass generated by managed forests. The developed and submitted to the UNFCCC NAMA Registry with the goal of: (a) providing robust and credible MRV for the GEF-financed COMPOST project, and (b) scaling-up the COMPOST project beyond the geographical boundaries being supported by the GEF. Registration of the population of the 6 cities/towns Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa and Mekelle covered by the NAMA COMPOST project in the UNFCCC NAMA registry is on final stage.

Conclusion on Outcome 4: Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework.

Six composting sheds were constructed and equipping with essential facilities improved both the quantity and quality of compost production. The total annual compost production capacity of the cities reached more than 45,000 tones/ city. A total of 109,220.7 tons of compost were produced from 363,704.93 tons of organic waste in the project period. Most importantly, the effectiveness of this project is manifested through linking composting and urban/peri-urban greening, contributing to GHG emission reduction and by diverting the organic fraction of waste from land fill which otherwise would emit CH4 to pollute the air and sequestering CO2 respectively. It also protected environmental pollution by using compost as replacement to chemical fertilizers for urban greening. The project has achieved a total of 109,220.7 tons of CO2 emission reduction both the greenery and composting activities.

Reports and participants interviewed indicated that the soil and water conservation structures built and the increased in vegetation cover as a result of area closure and tree plantation on cliffs surrounding the cities retained the topsoil from erosion that again created favorable condition for more vegetation to regenerate. This positively impacted on the environment through carbon sequestration, protection of biodiversity, protecting land degradation and maintaining ecosystem services of the areas. The effect was farfetched in protecting and maintaining water bodies like Lake Hawassa of Hawassa city, Lake Tana of Bahir Dar, rivers such as Abay and Awash to which rivers from those cliffs surrounding the cities drain were being affected by siltation as a result of soil erosion and landslides in these areas. The gullies and degraded areas were now rehabilitated that defiantly reduced siltation on those water bodies caused by extreme flooding mainly during raining season. Trees planted by the community in their compounds, roadsides, parks and areas surrounding the cities were also contributing to prevention of extreme heat and hence enhancing urban resilience to the impact of climate change in the six cities.

5.3 Recommendations

No.	TE Recommendation	Entity Responsible	Time frame
1	There need to support SME'S by looking for ready markets for their products for social-economics sustainability to be achieved.	City Administration, MUDC	March, 2022
2	Consider continued financial and technical support to SMEs and beneficiaries of the project.	City Administration, MUDC/UNDP	March, 2022
3	Awareness creation to continue changing communities' attitudes towards ISWM and UGI. This is because changing people's attitudes to engage on sorting and transporting wastes requires a lot of efforts.	City Administration, MUDC/UNDP	March, 2022 and ongoing
4	Invest in research, training and capacity building in partnership with research institutions, universities for the purpose developing new innovations and products.	City Administration, MUDC	March, 2022 and ongoing

5	Implementation of risk management plans by identification and documentation of risks in order to mitigate project risks.	City Administration, MUDC/UNDP	March, 2022
6	Establishment of recreational Centres with different facilities such as sports that can help generate income and create more jobs for financial sustainability.	City Administration, MUDC/UNDP	No time frame
7	Establishment of small factories in the cities for processing of local wastes like plastic bottles and metals, rather than transporting crushed plastic wastes to Addis Ababa for processing.	City Administration, MUDC/UNDP	Continuous activity
8	Ensuring more private and public sectors involvement in compost marketing. This will benefit private and public sectors engaged in agriculture and greeneries as well as MSEs engaged in compost production.	City Administration, MUDC	March, 2022
9	Law enforcement to protect the rehabilitated areas and sites from illegal land grabbing and encroachments into the project sites in collaboration with key stakeholders	City Administration, MUDC/communities	Continuous activity
10	Promote more utilization of organic fertilizers in collaboration with MoANR, agricultural research institutions and NGOs to create demand for compost which is directly linked with agricultural market, sales and increased income	City Administration, MUDC	March, 2022
11	Undertake impact evaluation after the project is handed over to the communities.	UNDP	After March, 2022
12	Strengthen local and institutional capacity in monitoring and evaluation systems for project accountability and continuous learning.	City Administration, MUDC	March, 2022
13	Consider support afforestation and reforestation of 1,270ha of lands in five project cities.	UNDP	June 2022
14	Procurement, distribution and installation of balling machine in the five cities.	UNDP	June 2022
15	Determining the survival rates of planted seedlings per annum starting from 2021.	UNDP/MUDC	June 2022
16	Consider to grant a cost extension for the purpose of completing the remaining project activities by the PMU	UNDP	June 2022

5.4 Lessons learned and Project Good Practices

Lesson 1: Application of market based approach is beneficial for successful and sustainable waste management and urban greenery development.

One of the good practices drawn from NAMA COMPOST project is application of market based approach for successful and sustainable waste management and urban greenery development. Market linkage is created between both components in such a way that compost produced from municipal solid waste is sold to the city administration for plant nursery site and afforestation/reforestation activities as well as to MSE engaged in seedling raising and sales business. Similarly, MSEs engaged in plant nursery business sales seedling to the municipality for urban and peri-urban afforestation and reforestation/ rehabilitation activities. Hence, in these six cities of the project sites, urban solid waste is no more merely considered as a waste, it is a resource that has been neglected and left to pollute neighbor-hoods and create all sorts of ailments. Now it have become a resource for creating jobs, livelihoods and in the process helped to create healthy and livable cities. It all boils down to incentives to communities. Solid waste has created incentives to communities that can shorten its lifespan in these cities where NAMA COMPOST project is being implemented.

There are three benefits gained from creating market linkage among both components. The first benefit is, because the MSEs get immediate income from sales of their product (compost or seedlings) to the project, they can stay in the market without facing much challenge until they are able to secure additional market. The second benefit of adopting market based approach is that project intervention outcomes are likely to sustain without a need for further support as long as the MSEs generate income. The third benefit is by picking waste for composting and recycling MSEs are sharing government burden in waste management and the cities are becoming cleaner than ever before.

Case Story 1: Green Image MSE engaged in Plant nursery business in Hawassa

Green Image is an MSE that was established with the support of Hawassa city administration whose members were trained and provided with material support by the project. This MSE is engaged in tree seedling raising and sales business which was the first in its kind in Hawassa city when they started. The municipality has also provided them with a plot of land close to Lake Hawassa for free where they established their nursery site. Members say that "at the beginning, we had no market for our seedlings since people didn't know we exist". They were hesitating either to stay or quit the business because they were not sure whether they are generating income to support their livelihood or not due to lack of market for their seedlings. When the NAMA COMPOST project became fully operational in Hawassa, the municipality started buying seedlings with project fund from this MSE for the afforestation/reforestation program which helped them to generate income and continue with the seedling business to survive. Motivated by the income, they then started marketing their business to factories and nearby towns that the demand started to grow from time to time. They started selling their seedling not only within Hawassa city administration but also to neighboring towns such as Sodo and Dilla found 130 Km and 86 km far from their business area respectively. "We began with seedling raising on few number of pots in a small area using Birr 6,250 capital contribution by members. Now, we have six branch nursery sites that worth hundreds of thousands Birr capital and we are supplying to towns and cities south and south west of Hawassa" says Ephrem Elias, founding and manager of the MSE. Now more than 5 MSEs are engaged in similar business creating jobs for more than 20 people. Moreover, the start of MSE owned nursery business has reduced cost of tree plantation by the municipality and is encouraging people and government to green their cities. This is because, Hawassa city administration for instance, had to travel more than 230 km to buy seedlings especially ornamental trees from Bishoftu before the start of these MSEs that used to cost them a lot of money.

Nursery site of Green Image

Lesson 2: Developing new way of working in UGI (nursery development, species selection, title deed, management, MSEs) is important for urban and peri-urban greenery area development is improving all components throughout the value chain than focusing only tree plantation in order to sustainably solve bottle-necks in the sector.

There are new ways of working introduced to the urban greenery development efforts of the cities which is different from the usual practice. Prior to the project, the practice was seedlings donated by nursery areas of other institutions mainly bureau of agriculture or procured from private suppliers were planted usually during rainy season without due consideration to the management, survival of seedlings and watering requirements. As a result, planted seedlings had low or no survival rates and therefore similar program [plantation] is undertaken on the same place the following year and so on. Urban and peri-urban greenery area management was not successful and they were highly threatened by land encroachment as well as deforestation.

One of the new approaches introduced by the project on urban and peri-urban greenery area development is improving all components throughout the value chain than focusing only tree plantation in order to sustainably solve bottle-necks in the sector. This includes skill building, development of standard and guideline and establishing new nursery sites or enhancing seedling raising capacity of the existing ones. For instance the project has supported the start of new nursery sites in three cities; Mekelle with seedling raising capacity of 1,500,000/year, Dire Dawa 2,600,000/year and Bahir Dar 2,000,000/year. Moreover, seedling raising capacity of two nursery sites, Bishoftu and Adama has increased by 800% (2,500,000/year) and 600 % (2,000,000/year) respectively. This approach has made afforestation/ reforestation program of the project more successful by increasing quantity of seedlings and reducing associated costs. The project has also identified tree species suitable for agro-ecological condition of each city to guide species selection while raising seedlings provided water reservoirs as well as trained and certified people employed in the nursery sites. The other newly introduced approach is introduction of mechanisms that can enhance protection and management of afforested and reforested/rehabilitated areas that boosted the survival rate of trees and sustainability of the urban greenery areas. Such an approach includes:

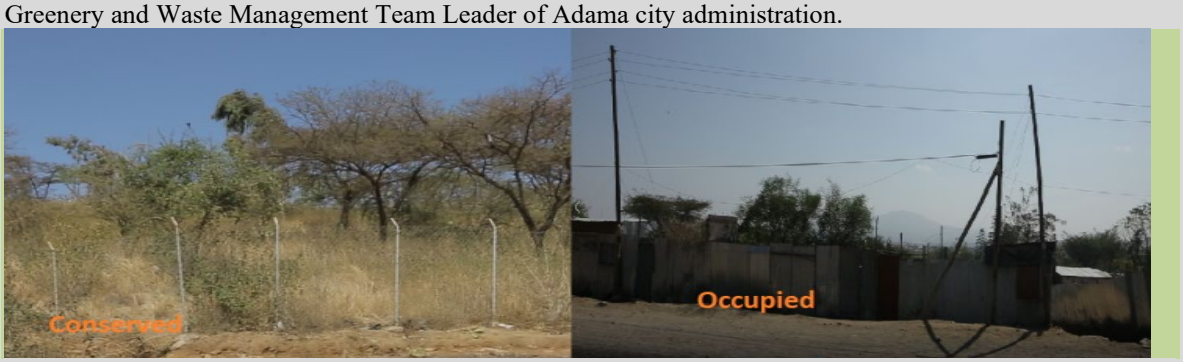
(i) Securing title deed: Title deed is secured for more than 20,914 ha of afforested or reforested and rehabilitated degraded areas until 2020 in the six cities to support law enforcement effort of the municipalities.

(ii) Diversifying greenery area management: Diversified managing entities are introduced that includes city administration where the municipality plant trees through community mobilization, fence the area and emplace guards for the sites. MSEs whose members are selected from the local community who manage and generate income through cut and carry of grass for sale as well as for their livestock, collecting fees from organizing events such as wedding in the parks, providing cafeteria services, fire wood plantation as well as bee hiving. The local community who develop the area and use it as recreational place, for social gathering and children play ground. Private and government organizations who cover cost of plantation and management as social contribution. In all aspects, the sites remain under the ownership of the municipality. Only their management and use right is transferred with clearly stated Memorandum of Understanding as to what is allowed and not allowed.

(iii) Sustainable intervention: Rehabilitating degraded land using area closure, constructing soil and water conservation structures, availing sustainable water source and plantation of edible fruits is also another new way of working introduced by the project for successful and sustainable greenery areas development in the cities

Case Story 2: Migra City Park in Adama

The Migra City Park is 22 ha wide found at southeast part of Adama city. This park including surrounding areas was dedicated for peri-urban greenery site. However, prior to the project intervention, this greenery area had no proper management in place and had no title deed. As a result, there had been expansion of illegal settlements and most of it is already occupied by illegal settlers. Following the start of NAMA COMOPOST project however, the city administration enclosed the unoccupied part of the greenery site and fenced the area to protect it from illegal access. Then title deed was secured by clearly demarcating its border, trees were planted, MSE composed of people drawn from the nearby village was established who are allowed to generate income without affecting the area under a clear Memorandum of Understanding. While protecting the site, members of the MSEs are now generating income from labor fee for constructing soil and water harvesting structure, selling of grass for livestock and the municipality for nursery site and bee hiving which is going to start soon. Moreover, 7 of them are permanently employed as guards by the municipality. The enclosed area which was severally degraded due to overgrazing and deforestation took only two years to regenerate and become forest. People give witness that the area was highly degraded with no vegetation except invasive species called Lanthana camara. The remaining part of the Migra area where the project didn't intervene is now totally occupied by illegal settlers and is highly degraded. "Having such a green and open space in Adama town is a great opportunity for the community. The fate of this park would have been similar to adjacent places if there has not been intervention by the project" says Tsehay Getahun; Urban Greenery and Waste Management Team Leader of Adama city administration.



Migra park (left) Occupied Area (Right)

Lesson 3: *Solid waste recycling and composting* has not only created jobs for many people engaged in the business but it also has contributed to the improvement of city cleanliness.

The start of solid waste recycling and composting has not only created jobs for many people engaged in the business. It also has contributed to the improvement of city cleanliness because all recyclable and part of bio-degradable wastes are collected by people engaged in such business for its monetary value. It is also contributing to preventing environmental pollution including water bodies and emission reduction. Moreover, it also has an implication on reducing government cost of waste collection from public areas as well as cost of landfill management through reducing the amount of damped waste.

Case Story 3: Migra Pond in Adama

Migra pond is found on the south east of Adama city close to Migra park mentioned above. This seasonal pond is formed during the rainy months of the year by water runoff from the city. As explained by the staffs of the city administration, this area used to be full of waste mainly plastic water bottles carried and transported by flood from Adama city which was observable from a long distance from the site. Now the pond is clean from such type of waste and you don't see water bottles in the area anymore. During rainy season, it looks like a natural lake. This development is the result of the start of recycling business in the city which became a reason for the establishment of MSEs in the recycling business and the "scavengers" to collect such type of waste effectively from every corner of the city for sale.

PET recycling impact on Migra Pond

Lesson 4: *System level Capacity Building in the cities is a required intervention for the better achievement of project objectives and sustains outcomes.*

The project has been working on system establishment while the on ground solid waste management and urban green infrastructure development intervention was going on. System establishment was considered as mandatory intervention for the better achievement of project objectives and sustain outcomes. The following are achieved towards systemic capacity building in the cities:

(i) Compost Standard and Guidelines: prior to the start of composting in the cities, exposure visit was arranged to Uganda for municipality leaderships and experts from MUDC where participants learned about the required inputs to operate solid waste composting. Compost standard was then developed based on experience gained from that visit which guided related intervention later on. Accordingly, composting sheds were constructed and composting guideline was developed on which hands on training was provided to the MSEs who are engaged in this business. The standard is approved by Ethiopian Standardization Agency so that it can be used as reference while replicating similar interventions to other cities in the future.
(ii) Certificate of Competency (CoC): one of the challenges identified in the ISWM and UGI sector is in availability of skilled manpower to guide and operate successfully. The project has been arranging trainings for municipality staff and people interested to be engaged in related business and field of work. In addition to the training, the project has supported trainees and experienced people to pass through (Certificate of Competency) CoC tests and get certified in different levels so as to practically check whether individuals possess the required skill and knowledge. By doing so, skilled labor of the sector has increased and employability of people has been enhanced. So far more than 7,741 people are certified in ISWM and 2,634 in UGI of which more than half of them are female.
(iii) Transposing Standards: There were ISWM and UGI standards at federal level. But they were not adopted at city level to guide their work. One of the project achievements was transposing these standards to city level, train the municipalities' leadership and experts and support them to develop implementation plan. This intervention has more or less sustainably changed city practices in both sectors which defiantly will continue after the project phased out.

Lesson 5: *Creating Model Villages for clean and green city is effective in creating community awareness through door to door communication, school outreach programs and community sensitization workshops as well as using national and local print and non- print media.*

The project has undertaken community awareness raising activities through door to door communication, school outreach programs, using posters, community sensitization workshops as well as using national and local print and non-print Medias such as radio and television on waste handling in general and waste segregation in particular. The awareness raising effort is augmented by distribution of colored bags mainly to 58 model Villages in the six cities with 200,566 households to encourage segregation. Primary waste collecting MSEs are also made responsible to teach and lobby or positively influence the community to segregate wastes into degradable and bio-degradable at source. Similarly colored dust bins are erected on pedestrians along streets with high traffic routes. As a result behavioral change is observed in the community mainly in the model villages who has started segregation of waste at source as well as proper disposal of waste from their houses. There was no source segregation practice in all of the six cities prior to the start of the project intervention as discussed in the baseline. The model

villages are regularly cleaning their surroundings and there is no illegal dumping of waste in these areas. Some of the households, with enough space in their compound have started small scale composting in their plot and use it for their gardening and greening.

Lesson 6: *Stakeholder Engagement and Partnership with different units of the city administration, world bank, universities, government investment, green legacy, building on others is the key to effective project implementation and mobilization of resources.*

The project uses National Implementation Modality (NIM) where the fund is channeled from UNDP through MUDC to the cities who actually execute the project work. It is directly implemented by staffs of the city administrations under the leadership of the Mayor. The project has used this implementation modality as an advantage to coordinate stakeholders' efforts to engage in similar area of intervention and mobilize local resources as follows:

(i) Building on Past Interventions: The project has invested on former interventions by government or other donors which are not completed or have gaps to provide the required service. For instance there was a small compost shed constructed by the support of Climate Resilient Green Economy (CRGE) related project in Hawassa but was not functional for a long time. An MSE was organized and supported by the NAMA COMPOST project to start composting in this shed until the shed which was under construction by the project is completed. Three former landfills were closed and rehabilitated by CRGE in Dire Dawa, Adama and Hawassa were greened and their infrastructure developed that made all of them open for public use such as for recreation and organize social events like wedding.

(ii) Coordinating Efforts: the project has conducted awareness raising sessions to people responsible for project implementation on how to coordinate efforts from different departments mainly units of the city administrations in implementing activities. As a result, project activities are implemented through joint efforts of different departments. For instance the greenery areas are developed with coordinated effort from different units in the city administrations such as units responsible for cadastral map development, mapping, give legal title of the areas, environmental protection etc. Moreover, co-funding was one of the strategies employed for the project success. Composting sheds of Hawassa and Bahir Dar were constructed with significant funding contribution from the municipalities of both cities; Adamas' shed and most greenery areas of the project are fenced by government budget and plant nursery sites of Mekelle and Dire Dawa were established with joint investment by the project and the cities.

Case Story 4: Cities Forum Park in Dire Dawa

Cities Forum Park of Dire Dawa is 14 ha wide established by the city administration as commemoration to an annual forum of Ethiopian cities held in the city in 2017. Since then however, there was no any development in the park and was closed without services. Following the start of NAMA COMPOST project however, the park was made open to public use after the city administration greened and developed its infrastructure using the project funding. Moreover, plant nursery site is established that supply seedling to the park as well as the whole city, according to Ato Yalew, who is an expert in the city administration. He also further said, it has reduced government costs for greenery development. Moreover, the survival rate of trees was too low due lack of adaptability to the weather condition of Dire Dawa because they were buying seedlings from other areas mainly from Bishoftu. Now seedlings are raised under the weather condition of Dire Dawa that has increased and improved trees' survival. The city administration didn't stop here. It has developed an advanced design using project funding for which the city administration is looking for fund for its construction.

City Forum Park Dire Dawa

The project has also been communicating with like-minded organizations to coordinate resource for better achievements. Some of the established partnerships are long term. One good example of long term linkage is the partnership created between cities and universities and research institutes on compost testing and urban greening such as Bishoftu with Bishoftu Agricultural Research Institute, Dire Dawa with Haromaya University and Hawassa with Hawassa University. Some of them are temporary partnerships focusing on specific events. For instance two workshops have been organized by sharing expenses with UN Habitat Public Space Program and training in partnership with World Bank.

Case Story 5: The World Bank Training in Bishoftu City

The GEF/UNDP funded NAMA COMPOST Project, World Bank Funded ULGDP project and Bishoftu City Administration have arranged high class training on Municipal Solid Waste Management for 66 experts drawn from 10 cities and the Ministry of Urban Development and Construction. Each of them had small resources which the other partner does not have. But partnership gave them the opportunity to have everything they need to achieve a common goal which otherwise was almost impossible. Here is how the partnership worked out. The ULGDP project had a capacity to bring international well known consultants on board who can give high class training on Municipal Solid Waste Management but had no resource to cover costs related to mobilization of trainees and training facilities as well as personnel who can facilitate the program. NAMA COMPOST project had small budget that only can cover cost of trainees and training facilities as well as the required personnel. Both projects on the other hand lack solid waste management facilities and machineries required for hands on training which Bishoftu City Administration had. Thanks to partnership, all of them brought their resources together and have made such wonderful training possible. Following that, experts who took part in the training were brought together to develop a model Integrated Solid Waste Management Planning Guideline for Ethiopian cities. This guideline will be adopted to six cities where NAMA COMPOST project is under implementation as a pilot.

The project has been under implementation by adopting the stipulated strategies in the prodoc on the ground of ISWM and UGI practices of the city administrations with some modifications. Therefore, different approaches have been used in the six cities in the improvement of Integrated Solid Waste Management including composting and recycling as well as development of the Urban Green Infrastructure such as afforestation, reforestation, rehabilitation of degraded areas and related management practices. Some of the approaches are more successful than others. As a result, different lessons are learned that needs to be adopted as

needed for the better success if similar project is to be replicated in other cities or up-scaled in the existing project site cities of NAMA COMPOST project.

Lesson 7: *Engaging composters in waste collection results in better waste segregation and quality of compost by engaging Micro and Small Enterprises, it makes composting and waste collection practice more successful.*

Micro and Small Enterprises engaged in composting in Adama are also recruited by the municipality to undertake door to door collection of waste and provide transportation service. They are paid for the collection and transportation service they provide. We don't have similar modality in the remaining five cities. This modality has made the composting and waste collection practice more successful that others have to take as lesson for three reasons. The first reason is that these MSEs are earning more income than similar MSEs in the other cities because in addition to the income they generate from compost sales, they also are paid for the waste collection and transportation service.

The primary recommendation to maintain quality of compost is to have the waste segregated at source as well as transported separately to avoid contamination of the waste by unnecessary chemicals. This leads us to the second advantage of Adama's working modality. This is because the MSEs collect the waste from the source by themselves which is segregated at source and separately transported it to the composting shed that ensures quality of the compost. They are very much careful not to have a mixed waste in order to avoid the hustle they will face in segregating the waste at the transfer station or in the shed. The third advantage of such working modality is having a better low enforcement in waste segregation by households. Since the MSE want the waste delivered separately, they are teaching and enforcing the community to segregate their waste. Community attitude has also changed as a result of continuous awareness raising by the MSEs and because they practically see waste being separately transported unlike in the other cities where the community is told to segregated waste but actually is mixed during transportation.

Case Story 6: MSEs engaged in both waste transportation and composting in Adama

There are 3 MSEs members engaged in composting in Adama. These MSEs are organized by the Adama city administration and supported by the project to start composting in a shed constructed for this purpose. They are provided with hands on training on how to produces quality compost using windrow technology, given an easy to understand composting guidelines according to a composting standard developed for this purpose and given the basic equipment necessary for composting and self- protection. What made this MSEs special is that the city administration contacted a government owned factory called Adama Agricultural Machineries Manufacturing to supply six tractors for the MSEs while the city administration took collateral responsibility as well. The administration contracted the MSEs one to collect waste from household and transport and second to supply compost for urban nursery sites and urban greening practices at agreed price. Then the administration deducts from every payment and use it repay their loan to Adama Agricultural Machineries Manufacturing, that has solved loan repayment ineffectiveness which is the major problem all cities have faced. By now, the MSEs have almost paid back the full amount and owned the tractors. Similar arrangement is adopted by Bishoftu city.

Lesson 8: *Use of receipt for compost results has better market linkages.*

The major compost buyers are the city administrations for plant seedlings raising and urban green infrastructure development. Staff of the cities administrations responsible for urban cleaning and beautification witnesses that greenery areas such as city parks and medians on

which compost is applied are greener than areas that are not. But there is always a gap in creating the linkage. MSEs who are contracted to manage the greenery areas usually don't buy compost from the project sites which is high quality but more expensive. They usually go for the cheapest compost suppliers such as animal dung if they use compost at all. However, application of animal dung is quite different from the use of compost since the former has weeds because it doesn't pass through the composting process to kill pathogens. However, compost in the project sites is produced using windrow technology where the waste pass through multiple stages of heating and turning that makes the product free of weeds and any pathogen which makes it more expensive. To avoid the gap in market linkage, Hawassa city administration has introduced a working modality where MSEs are supposed to include price of compost (produced in the project site) in their biding document when competing for tender on urban greenery areas management service. Then the awarded MSE has to submit receipts to proof it has bought compost from project sites when requesting payments. By introducing such cross checking system the market linkage is successfully functioning in Hawassa.

Lesson 9: *Community ownership leads to protection and sustainability of urban greenery areas.*

Community based greenery area management is one of the new way of working introduced by the project. All of the six project cities are more or less practicing similar arrangement. Urban greenery areas which are managed by the community are well developed and more sustainable than others which is one of the lessons drawn from the project. The experience of Bahir Dar shows how sustainable these places will be.

Case Story 7: Community ownership case story in Bahir Dar

The community park discussed here is found in Finote Kebele, Dagmawi Minilik sub city of Bahir Dar. This park is 1 ha wide which was developed by the city administration with full participation of the community living around the site using project fund. Title deed was produced for the site that delineates its boundary, appropriate tree species were planted and fenced with the support of the project. Then the city administration developed a Memorandum of Agreement that clearly states what is allowed to do and what is not within the greenery area and transferred its management responsibility to the community.
Accordingly, the community has been developing the site and using the area since 2018 based on the agreement entered between the community and the city administration. In 2019, fire breakout in one of the villages in Bahir Dar far from the site which burned down many houses. Following that the city administration took a move to settle the affected people in the greenery area. However, the community refused the settlement plan by showing the agreement they had with the city administration to the officials. As a result the greenery area has been saved from destruction. There are two more community green areas with similar experience in Bahir Dar.

Lesson 10: *Project Management Dashboard is useful to the PSC, it helps in presenting clear understanding of which target are achieved, the one on progress or lagging behind and it shows performance of each city against each indicator and for making decision on time.*

The project has a Project Steering Committee composed of members from UNDP Management Level, MUDC State Minister, all project Cities Mayors, EFCCC GEF focal person, MOF Director and Four Related Regional Bureau heads. The Steering Committee is co-chaired by UNDP and MUDC and is responsible to oversee overall performance of the project. So far the committee has met eight times including one ad hock meeting held to decide on procurement of

composting machines. From the minute of the meetings, it can be understood that the committee has made very important decisions and gave directions for the project management unit. Having a project steering committee composed of multiple stakeholders is not a new phenomenon since most projects have the same organization. The lesson we can learn from the NAMA COMPOST project which can be taken as good practice is the way the committee follows up performance of the project which is not common in other projects I ever have exposed to. The project manager has developed a dashboard to monitor and rank the cities according to their performance using pre-agreed criteria. The dashboard is presented to the PSC during their meetings based on which decisions are made. The dashboard has helped the PSC to clearly understand which target is achieved, which is on progress and what is lagging behind. Moreover, it also clearly shows performance of each city against each indicator. This has not only helped the PSC to make the right decision on time, but also has created healthy competitions among cities.

Lesson 11: *Creating Opportunities to organize MSEs along Value Chain helps MSEs to raise more seedlings, grow their businesses and capacities and start selling to other close by cities.*

Cities (municipalities and organizations) such as Hawassa used to travel many kilometers of distance for procurement of ornamental seedlings for city beautification. The project MSEs have been created in the business area of seedling raising with the support of the municipality. The MSEs started raising seedlings mainly ornamental type then the municipality became the first market by procuring the seedlings using fund from the project to green project targeted areas. This encouraged the MSEs to raise more seedlings. Now the MSEs' capacities have grown and have started selling to other close by cities that has reduced their travel costs. Similarly, the capital of the SMEs is growing and is expanding their business. The same is happening in the other cities where the project is intervening.

Lesson12: *Peri-urban afforestation/reforestation and land titling helps to create a vibrant urban area under good municipality plan and implementation of proper land use.*

Urban and Per-urban forestry (Urban forests) should be a priority to the City mayors to make sure that the ever-increasing urban population will have sufficient and sustainable water supply. In the current mode of water use/abstraction of surface and underground, there might be significant risk for many urban centers to be in the state of emergency. The challenge in this regard is mainly related to unregulated illegal and formal settlements particularly in steep slope and mountainous landscapes. Complete land use change from forest, grassland and in some cases agriculture land to unplanned settlements is the obvious and continuous practice. Local government could not be able to stop this kind of settlement either due to lack of capacity or corruption. The important message is that to have a vibrant urban area each municipality should be capitated to plan and implement proper land use and to have sufficient forest area within and around. Aim towards Climate Smart Urban development. NAMA GEF Project can be considered as pioneer in this regard.

Lesson 13: *Linkage between compost production and Urban and Peri urban afforestation and reforestation greening is important because it connects compost producers and urban greenery MSEs where compost produced is used for plantations in urban and peri urban areas and gives confidence to the compost producers because of sustainable market*.

Compost is produced from waste that is produced by urban/city dwellers. The compost producers and urban greenery MSEs are connected by the municipality and the compost produced is used for plantations in urban and peri urban areas. Application of fertilizer to plantation is not that much customary practice. However, this project proved that applying compost for afforestation/reforestation provides significant result (up to 90 percent survival rate). The linkage gave confidence to the compost producers because of sustainable market.

ANNEXES
ANNEX A. TE TERMS OF REFERENCE

GENERAL INFORMATION

Services/Work Description:	Recruitment of Consultant for Conducting Project Terminal Evaluation
Project/Program Title:	Ethiopian NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (COMPOST)
Post Title	International Consultant (IC)
Consultant Level	Level B
Duty Station:	Addis Ababa
Expected Places of Travel	Adama, Bihoftu, Bahir Dar, Dire Dawa, Hawassa, Mekelle
Duration:	Work to be carried out over 40-days period
Expected Start Date:	Immediately after concluding the contract agreement

BACKGROUND/ PROJECT DESCRIPTION

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP-supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the full- sized project titled Ethiopian NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (COMPOST) (PIMS 5541) implemented through the Ministry of Urban Development and Construction. The project started on the 1st of January 2017 and is in its 4th year of implementation. The TE process must follow the guidance outlined in the document 'Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects.

The COMPOST project is designed to promote greater use of Integrated Solid Waste Management (ISWM) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns that will assist the Government of Ethiopia in achieving the objectives of its Growth and Transformation Plan (GTP II). This will be achieved through four outcomes: i) strengthening the regulatory and legal framework and institutional coordination mechanisms to integrate ISWM and UGI within urban systems; ii) a developed market-based system with micro and small enterprises (MSEs) that are supported professionally to ensure financial sustainability of compost production and utilization; iii) implementation of a Nationally Appropriate Mitigation Action (NAMA) that transforms the capacity of integrated urban systems to generate large emission reductions; iv) operationalized urban systems that integrate ISWM and UGI, with quantified GHG emission reductions, within a NAMA framework.

At the end of its lifetime, the COMPOST project will deliver direct annual emission reductions from UGI initiatives and ISWM equal to approximately 306,000 and 132,321 tCO2e, respectively. These will accrue from the annual generation of 45,489 tons of compost from 151,629 tons of household organic waste, and the reforestation of 33, 309 ha of degraded land by the end of the 5-year project lifetime. By assuming a lifetime of 20 years for compost facilities and managed landfills as well as for carbon sequestration and the generation of renewable biomass for thermal energy, the direct emission reductions generated by the project will be 8.33 MtCO2e, giving a GEF abatement cost of 0.80 US$/tCO2e. The number of direct jobs created through composting by the end of the 2021 will be 744, of which at least 50% will be for women and youth. Additional direct jobs will be created by the UGI activities of the project, such as in nurseries, and digging and planting of trees. The project will produce co-benefits such as increased resilience of urban areas to drought and flooding hazards, and improved quality of life in urban areas.

Project interventions are in line with the Climate Resilient Green Economy (CRGE) strategy of Ethiopia. In addition to the CRGE, the project is also linked to other strategies developed to promote urban green development that cover both Integrated Solid Waste Management (ISWM) and Urban Green Infrastructure (UGI) that support country focus towards developing a renaissance of its cities and contribute to building a green economy. The major policies and strategies related to the project are the (1) Climate Change Resilient Urban Green Development Strategy (CCRUGDS) developed to ensure that Ethiopian cities contribute towards national development and transformation and the (2) Climate Change Resilient Green Infrastructure Strategy which identifies areas that have a significant contribution to GHG emissions and which have a serious impact on climate change. It also contributes to SDGs mainly, SDG 11 Sustainable Cities and Communities; SDG 12 Responsible Consumption and Production and SDG 13 Climate Action

The project is implemented though Ministry of Urban Development and Construction in Six cities; Adama, Bishoftu, Bahir Dar, Dire Dawa, Hawassa and Mekelle. Partnership has been established with like-minded organizations from federal to city levels that are organized under steering committee and technical committees. The project has passed through Mid Term Review process by independent consultants from which report is available. The TE report will assess the achievement of project results against what was expected to be achieved, and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency, and assesses the extent of project accomplishments. It also identifies intended and unintended project impacts, success stories, and areas of improvement during remaining project period and recommend possible scale up or replicating strategies. The TE will also review the project's strategy, risks and opportunities to achieve project objectives during remaining time period and sustain results. Major partners of the NAMA COMPOST project are the Ministry of Urban Development and Construction (MUDC), Ministry of Finance (MOF), the six city administrations, Environment, Forest and Climate Change, Ethiopia Standardization Agency, Micro and Small Enterprises and regional bureaus.

COVID-19 Country Situation and Impacts on Project
Following the outbreak of the COVID-19 pandemic, there have been subsequent movement restrictions imposed by the government to prevent wide spread of the virus. This has had impacts on capacity building related activities such as workshops and international travel. Moreover, companies such as Ethiopian Airlines, which were identified as potential buyers of carbon (carbon off setters), were seriously affected by COVID-

19. As a result, the market offset mechanism established by the project to generate sustainable income is not functioning. Currently, despite the wide spread of COVID-19 throughout the country, there is no need for quarantine or restriction on movements. Only international travelers are required to have a COVID-19 test 72 hours before departure or get tested on arrival.

SCOPE OF THE TE

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects (TE Guidance). The evaluators shall complete their work within 40 days and consult project stakeholders and beneficiaries at federal as well as cities (Adama, Bahir Dar, Bishoftu, Dire Dawa, Hawassa, Mekelle) level.

COVID-19 Impacts on Project Outcomes and Reprogramming

The outbreak of the COVID-19 pandemic and subsequent movement restrictions imposed to prevent its wide spread have disrupted implementation of project activities as planned, mainly in 2020. The livelihoods of many micro and small enterprises engaged in recyclable waste collection and sales business were affected because their market was impacted by the pandemic. The project has tried to minimize impact of COVID-19 on project beneficiaries by reprogramming budget from activities which could not be implemented such as training to creation of project-related temporary jobs such as waste collection.

The Findings section of the TE report will cover the topics listed below. A full outline of the TE report's content is provided in ToR Annex C. The asterisk "(*)" indicates criteria for which a rating is required.

Findings

i. Project Design/Formulation
   - National priorities and country driven-ness
   - Theory of Change
   - Gender equality and women's empowerment
   - Social and Environmental Standards (Safeguards)
   - Analysis of Results Framework: project logic and strategy, indicators
   - Assumptions and Risks
   - Lessons from other relevant projects (same focal area) incorporated into project design
   - Planned stakeholder participation
   - Linkages between project and other interventions within the sector
   - Management arrangements

ii. Project Implementation
   - Adaptive management (changes to the project design and project outputs during implementation)
   - Actual stakeholder participation and partnership arrangements
   - Project Finance and Co-finance
   - Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E (*
   - Implementing Agency (UNDP) (*) and Executing Agency (*), overall project oversight/implementation and execution (*)

- Risk Management, including Social and Environmental Standards (Safeguards)
- Impact of COVID-19 on project implementation and beneficiaries.
- Mitigation measures taken against COVID-19 and its impact.

iii. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (*), Effectiveness (*), Efficiency (*) and overall project outcome (*)
- Sustainability: financial (*) , socio-political (*), institutional framework and governance (*), environmental (*), overall likelihood of sustainability (*)
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- Progress to impact
- Impact of COVID-19 on achieving project results.

iv. Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.
- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses and results of the project, respond to key evaluation questions and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to incorporate gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown in the ToR Annex.

EXPECTED OUTPUTS ADN DELIVERABLES

The IC who will serve as team expert of the TE shall prepare and submit:

- *TE Inception Report:* NC in partnership with his/her team leader (the international consultant) clarifies objectives and methods of the TE no later than 2 weeks before the TE mission. NC together with the team leader submits the Inception Report to the Climate Resilience and Environmental Sustainability (CRES) Unit and project management. Approximate due date: Sept 23, 2021
- *Presentation:* IC presents initial findings to project management unit, experts and leadership from IP and cities and UNDP country office at the end of the TE mission. Approximate due date: Oct 05, 2021
- *Draft TE Report:* TE team (international and national consultants) submits full draft report with annexes within 3 weeks of the end of the TE mission. Approximate due date: Oct 13, 2021
- *Final TE Report* and Audit Trail:* IC submit revised report, with Audit Trail detailing how all received comments have (and have not) been addressed in the final TE report, to the project management unit 1 week of receiving UNDP comments on draft. Approximate due date: Oct 14, 2021

*The final TE report must be in English. If applicable, the Commissioning Unit may choose to arrange for a translation of the report into a language more widely shared by national stakeholders.

All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.5

#	Deliverables/Outputs	Estimated Duration to Complete	Review and Approvals Requred
1	TE Inception Report (TE team clarifies objectives, methodology and timing of the TE)	No later than 2 weeks before the TE mission: *(23 Sept 2021)*	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation (On Initial Findings)	End of TE mission: *(5 Oct 2021)*	TE team presents to Commissioning Unit and project management
3	Draft TE Report (Full draft report *(using guidelines on report content in ToR Annex C)* with annexes	Within 3 weeks of end of TE mission: *(13 Oct 2021)*	TE team submits to Commissioning Unit; reviewed by RTA, Project Coordinating Unit, GEF OFP
5	Final TE Report* + Audit Trail (Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report *(See template in ToR Annex H)*	Within 1 week of receiving comments on draft report: *(14 Oct 2021)*	TE team submits both documents to the Commissioning Unit

5 Access at: http://web.undp.org/evaluation/guideline/section-6.shtml

*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.[6]

INSTITUTIONAL ARRANGEMENTS

The principal responsibility for managing this TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is UNDP Ethiopia Country Office. The commissioning unit will contract the consultants and ensure the timely provision of payments for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits. The commissioning unit will not arrange international or local flights or pay DSA. The commissioning unit will only arrange vehicle for travel to the six cities. The IC is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the city administrations, direct beneficiaries, and other stakeholders.

Engagement of stakeholders is vital to a successful TE, thus, stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to Project staff, MUDC, EFCCC, City administrations MoF, MSEs, compost users, etc. Additionally, the TE team is expected to conduct field missions to Adama, Bahir Dar, Bishfotu, Dire Dawa, Hawassa and if the situation allows Mekelle. If field missions are not possible due to the COVID-19 situation as intended, the consultants will use different alternatives to get data and information from those areas and these include conducting virtual interview through phone or virtual communication platforms and sending out questionnaires. During the field visit the project office will provide the necessary logistics and administrative support to facilitate productive gathering of information from project beneficiaries and stakeholders at region level.

Virtual Meetings and Interviews during COVID-19
Arranging virtual meetings and interviews might be required if restrictions on movement are imposed by government due to COVID-19. In case of such situation, the project office will provide e-mail addresses or telephone numbers of participants to the consultants. Communication expenses will not be covered by the project unit.

LOGISTICS AND ADMINISTRATIVE SUPPORT

The Consultant will be responsible for providing his/her own working station including but not limited to Office Space; Equipment; Secretarial services; Local transport service; Arrangement of workshop(s) (if validation is required). For travels outside of Addis Ababa to the six project cities, UNDP will arrange vehicles. The IC is responsible for all other travel arrangements. Access to the key stakeholders and arrangement of meetings and associated costs will be facilitated and managed by UNDP and MUDC.

TIMEFRAME

The total duration of the TE will be approximately 40 days over a time period of 8 weeks starting on 14 September 2021. There will be flexibility in extending the timeframe in the event that the work of the evaluation team is affected by COVID-19. But related costs will not be compensated by the commissioning unit. The tentative TE timeframe is as follows:

Timeframe	Activity
August, 10, 2021	Application closes

[6] Access at: http://web.undp.org/evaluation/guideline/section-6.shtml

August 11, 2021	Selection of TE team
September. 13, 2021	Preparation period for TE team (handover of documentation)
September 14-19, 2021 (6 days	Document review and preparation of TE Inception Report
September 20-23, 2021 (4 days)	Finalization and Validation of TE Inception Report; latest start of TE mission
September 24 – Oct 4, 2021 (12 days)	TE mission: stakeholder meetings, interviews, field visits, etc.
October 5, 2021(1 day)	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
October 6-11, 2021 (7 days)	Preparation of draft TE report
October 12-13, 2021 (2 days)	Circulation of draft TE report for comments
October 14, 2021 (1 day)	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report
October 15, 2021 (1 day)	Preparation and Issuance of Management Response
October, 16, 2021 (1 day)	Concluding Stakeholder Workshop (optional)
October, 17, 2021	Expected date of full TE completion

Options for site visits should be provided in the TE Inception Report.

QUALIFICATION AND TEAM COMPOSITION

The International Consultant will work in close collaboration with a National Consultant. The International Consultant will be responsible for the overall design and writing of the TE report, plan all field visits, communicate with the project, collect and interoperate data, present findings and incorporate comments. TE ToR for GEF-Financed Projects – Standard Template – June 2021 9. The International Consultant cannot have participated in the project preparation, formulation and/or implementation (including the writing of the project document), must not have conducted this project's Mid-Term Review and should not have a conflict of interest with the project's related activities.

The International Consultant should have the following qualifications:

Education

- The International Consultant should have Master's degree in development studies, project management, economic, urban development or other closely related field.

Experience International Consultant

- Relevant experience with results-based management evaluation methodologies;
- Experience applying SMART indicators and reconstructing or validating baseline scenarios;
- Competence in adaptive management, as applied to climate change mitigation
- Experience in evaluating projects;
- Experience working in East Africa;
- Experience in relevant technical areas for at least *10 years;*
- Demonstrated understanding of issues related to gender and climate change mitigation; experience in gender responsive evaluation and analysis;
- Excellent communication skills;

- Demonstrable analytical skills;
- Project evaluation/review experience within United Nations system will be considered an asset.

Language International Consultant
- Fluency in written and spoken English

Functional Competencies:
- Practical experience in evaluating development projects particularly in relation with GHG emission reduction and mitigation measures.
- Experience in similar assignments and leading consultancy tasks
- Experience in formulating development strategies and policies;
- Excellent public speaking and presentation skills]
- Computer skills: full command of Microsoft applications (word, excel, PowerPoint) and common internet applications will be required.

Core Competencies**:**
- Demonstrates integrity by modeling the UN's values and ethical standards
- Promotes the vision, mission, and strategic goals of UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability
- Treats all people fairly without favoritism;
- Fulfills all obligations to gender sensitivity and zero tolerance for sexual harassment.

Important Note:

The Consultant is required to have the abovementioned professional and technical qualifications**. Only the applicants who hold these qualifications** will be shortlisted and contacted.

CRITERIA FOR SELECTING THE BEST OFFER:

Upon the advertisement Notice, qualified Firm is expected to submit both the Technical and Financial Proposals. Accordingly; the firm will be evaluated based on Cumulative Analysis as per the following conditions: Responsive/compliant/acceptable as per the Instruction to Bidders (ITB) of the Standard Bid Document (SBD), and Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation. In this regard, the respective weight of the proposals is:

a. Technical Criteria weight is 70%
b. Financial Criteria weight is 30%

Criteria	**Weight**	**Max. Points**
	70%	**100**
▪ Criteria a. Educational relevance: close fit to post		10
▪ Criteria b. Understanding the scope of work and organization of the proposal		50
▪ Criteria c. Experience in similar assignment		30
▪ Criteria d. Previous work experience in Africa/ Ethiopia		10
Financial (Lower Offer/Offer*100)	**30%**	**30**

PAYMENT MILSTONE AND AUTHORITY

Payments will be made based on actual days worked and upon submission of agreed deliverables (of satisfactory quality) and supporting documents. The consultant will indicate the cost of services for each deliverable in US dollars all-inclusive7 lump-sum contract amount when applying for this consultancy. The consultant will be paid based on the effective UN exchange rate (where applicable), only after approving authority confirms the successful completion of each deliverable as per the following payment schedule:

Installment of Payment/ Period	Deliverables or Documents to be Delivered	Approval should be obtained	Percentage of Payment
1st Installment	Final TE Inception Report	The Project Management Unit	20 %
2nd Installment	Draft TE report	The Project Management Unit "	40 %
3rd Installment	Final TE report	The Project Management Unit and Regional Technical Advisor (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail	40 %

Criteria for issuing the final payment of 40%

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e. text has not been cut & pasted from other MTR reports).
- The Audit Trail includes responses to and justification for each comment listed.

In line with the UNDP's financial regulations,

- When determined by the Commissioning Unit and/or the consultant that a deliverable or service cannot be satisfactorily completed due to the impact of COVID-19 and limitations to the TE, that deliverable or service will not be paid.

RECOMMENDED PRESENTATION OF TECHNICAL PROPOSAL

For purposes of generating quotations whose contents are uniformly presented and to facilitate their comparative review, a prospect Individual Contractor (IC) is given a proposed ***Table of Contents***.

a) **Letter of Confirmation of Interest and Availability** using the template provided by UNDP;
b) **CV and a Personal History Form** (P11 form);

7 The term "All inclusive" implies that all costs (professional fees, travel costs, communications, etc.) that could possibly be incurred by the Contractor are already factored into the final amounts submitted in the proposal.

c) Brief description of approach to work/technical proposal of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
d) **Financial Proposal** that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc.), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted to the address (insert mailing address) in a sealed envelope indicating the following reference "Consultant for Terminal Evaluation of Ethiopian NAMA: Creating Opportunities for Municipalities to Produce and Operationalize Solid Waste Transformation (NAMA: COMPOST)" or by email at the following address ONLY: *(insert email address)* by *(time and date)*. Incomplete applications will be excluded from further consideration.

CONFIDENTIALITY AND PROPRIETARY INTERESTS
The Individual Consultant shall not either during the term or after termination of the assignment, disclose any proprietary or confidential information related to the consultancy service without prior written consent. Proprietary interests on all materials and documents prepared by the consultants under the assignment shall become and remain properties of UNDP.

TOR ANNEXES
- ToR Annex A: Project Logical/Results Framework
- ToR Annex B: Project Information Package to be reviewed by TE team
- ToR Annex C: Content of the TE report
- ToR Annex D: Evaluation Criteria Matrix template
- ToR Annex E: UNEG Code of Conduct for Evaluators
- ToR Annex F: TE Rating Scales
- ToR Annex G: TE Report Clearance Form
- ToR Annex H: TE Audit Trail

ANNEX B: EVALUATION WORK PLAN

Project evaluation Phases	Description of Activities	Timeline in Year 2021	No. of days	Responsible
Inception Phase (Preparation)	-Signing of contract and Kick- off meeting ,sharing of project documents and desk review	20th-24th Sept.	5	Consultants, UNDP Program staff
	-Preparation of inception Report including work plan, methodology, data collection tools and evaluation matrix	25th -28th Sept	4	Consultants
	Deliverable 1: Inception Report	29th Sept.	1	Consultants
Field Mission Phase (Data collection & analysis)	-Finalization and validation of TE Inception Report including preparation for data collection	30th Sept- 2nd October	3	Consultants and UNDP Program staff
	-Field data collection, field visits to five cities of Adama, Bahir Dar, Bishoftu, Dire Dawa and Hawassa and Mekelle -Interviews with Ministry of Urban and Construction and Ministry of Finance - Interviews with Environment, Forest and Climate Change; Ethiopia Standardization Agency; Micro and Small Enterprises; Regional Bureaus and beneficiaries representatives from compost users.	3rd-17th Oct	14	Consultants
	Data analysis and Preparation of 1st draft evaluation report	18th-21th Oct	4	Consultants
	Deliverable 2: Draft TE Evaluation Report	22st Oct	1	Consultants
Reporting Phase: (Submission & approval)	-Finalization and validation of TE Draft Report & review of draft report by UDNP Programme staff	23nd-26th Oct	4	Consultants and UNDP Program staff
	Consolidation of comments and inputs from the stakeholders	27th -28th Oct	2	Consultants
	Preparation of Management Response	29th Oct	1	Consultants
	Deliverable 3: Submission of Final TE Report	30th Oct.	1	Consultants
	Total working days		**40 days**	

ANNEX C: EVALUATION QUESTION MATRIX

Evaluation Criteria Questions	Performance Indicators	Data Sources	Methods of data collection
1. PROJECT DESIGN/ FORMULATION			
National priorities and country driven-ness			
Was the project linked with and in line with UNDP priorities and strategies for the country?	Coherence between project objective and design with UNDAF	▪ National government development policies and strategies ▪ National policy documents & strategies on gender equality ▪ Final UNDP-GEF project document ▪ UNDP country programme document ▪ National planning documents ▪ Human Development Reports ▪ Mid-term review Report ▪ Project Assessment reports ▪ SDG Progress reports. ▪ Project beneficiaries	▪ Review of documents ▪ Analysis of views of stakeholders ▪ Analysis of views of beneficiaries ▪ Interviews of UNDP focal point, and participating government ministries and bodies
Does the project's objective align with the National government development priorities (SDGs, 10 Year Development Perspective plan and Home Grown) on ISWM and UGI within urban systems at National level?	Consistency of objectives with the Government strategies on integrating ISWM and UGI within urban systems		
Does the project objective fit GEF strategic priorities?	Level of coherence between project objective and GEF strategic priorities		
Was the objectives alignment with UNDP and GEF strategic priorities?	Coherence between project objective and with UNDP and GEF strategic priorities		
How was the project aligned with national policies and strategies on gender equality?	Consistency objectives with National policies and strategies on gender equality		
Is the project design appropriate to address substantial problems that the project is intended to address? How useful are the project out puts to the needs of the beneficiaries?	-Alignment of project objectives with GoE and GEF priority focal areas. -Degree of coherence of identified ISWM problems and UGI challenges with needs of NAMA Ethiopia. -Extent of support received from partners/beneficiaries/MUDHC, MOA, EFCCC, Six municipalities etc. -Observations at municipal level and opinion of target beneficiaries about the outputs to their needs.		
Analysis of Results Framework: project logic and strategy, indicators			
How clear, practicable and feasible were the project's objectives and project components within its time frame?	Clear practicable and feasible objectives and project components in the Results Framework	▪ Project assessment reports ▪ Final UNDP-GEF project document	▪ Review of documents ▪ Analysis of views of stakeholders

How SMART were the indicators in the Results Framework (Specific, Measurable, Attributable, Relevant, Time-bound/Timely/Trackable/Targeted)	SMART project objectives and indicators in the Results Framework	▪ Revised project document ▪ Logical/ result framework	
How consistent were the outcomes and outputs with the Theory of Change (ToC)?	Consistency between outcomes and outputs with the Theory of Change		
How did the project aim to capture broader development impacts (i.e. income generation, gender equality and women's empowerment, improved governance and livelihood benefits)	Broader development impacts well captured in Results Framework		
Assumptions and Risks			
Are the key assumptions relevant to the achievement of the Ethiopia NAMA COMPOST Project likely to be met?	Presence, assessment and preparation for expected risks and assumptions.	▪ Final UNDP-GEF project document ▪ Revised project document	▪ Review of documents ▪ Analysis of views of stakeholders
How were the assumptions and risks well-articulated in the project document? How did they help to determine activities and planned outputs?	Clear assumptions and risks well-articulated in the project document		
What are the key risks and barriers that remain to achieve the project objective of the Ethiopia NAMA COMPOST Project?	Actions undertaken to address key assumptions and target impact drivers		
Lessons from other relevant projects (e.g. same focal area) incorporated into project design			
How lessons from other relevant projects were properly incorporated in the project design?	Lessons from other projects properly incorporated in the project design	▪ UNDP programme staff ▪ Project documents ▪ MTR Report	▪ Document review ▪ Key Informant Interviews
Planned stakeholder participation			
How were stakeholders who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources taken into account during project design processes and implementation?	Planned stakeholder participation during project design and implementation.	▪ Baseline Assessment Report ▪ UNDP programme staff ▪ Focal persons of municipalities	▪ Document review ▪ Analysis of views of stakeholders
How the partnership arrangements were properly identified and roles and responsibilities negotiated prior to project approval?	Property identified the partnership arrangements in place.	▪ Project document ▪ UNDP programme staff ▪ Focal persons of municipalities	▪ Document review ▪ Analysis of views of stakeholders
Linkages between project and other interventions within the sector			

How were linkages established with other complementary interventions?	Linkages well established with other complementary interventions	▪ Project document ▪ UNDP programme staff ▪ Focal persons of municipalities	▪ Document review ▪ Analysis of views of stakeholders
Was there planned project coordination with other relevant GEF-financed projects and/or other initiatives, and how did they function?	Project coordination with other relevant GEF-financed projects/ initiatives		
Theory of Change			
To what extent did the project contributed to the Theory of Change (ToC) for the relevant UNDP country programme outcome?	Coherence between project objective and design with UNDAF	▪ UNDP strategic priority documents ▪ UNDP programme staff ▪ Focal persons of Municipalities	▪ Document review ▪ Analysis of key Informant Interviews
2. PROJECT IMPLEMENTATION			
Adaptive Management (changes to the project design and project outputs during implementation)			
What significant changes did the project undergo as a result of recommendations from the Mid-Term Review?	Approved changes by project the management	▪ Project Progress Reports ▪ UNDP programme staff ▪ MTR Report ▪ UNDP, focal point, and participating government ministries and bodies ▪ MTR Report ▪ Progress annual reports ▪ Minutes of Steering Committee ▪ Minutes of Project Board Meetings ▪ UNDP programme staff Six Municipalities	▪ Document review ▪ Analysis of key Informant Interviews ▪ Interviews of UNDP focal point ▪ Interviews of Participating government Ministries, Municipalities and other bodies ▪ FGD with beneficiary representatives
To what extent has the project interventions experienced any significant changes (Plans, strategies, logical framework) during execution? What were the implications of these changes to the project outcomes?	-Degree of changes to project design and project outputs during implementation. -Level of stakeholder participation and partnership arrangements. -Indicative project budgets (Finance & co-financing), -Monitoring and correction activities undertaken.		
To what extent did the project adapt its approach to provide appropriate response to specific *changes in project design* and *project outputs* during implementation?	Response to changes in project design during implementation		
To what extent was project adapted its approach to provide appropriate response to specific *Changing Context* (Political, Economic, Social-Cultural, Technological & Environmental) during project implementation?	Response to the changing context of the project during implementation		
Actual stakeholder participation and partnership arrangements			

How did the project management leverage the necessary and appropriate partnerships with direct and tangential stakeholders?	Appropriate partnerships with direct and tangential stakeholders in place	▪ Project Progress Reports ▪ Project documents ▪ UNDP programme staff ▪ Focal persons of municipalities	▪ Document review ▪ Analysis of Key Informant Interviews
How did local and national government stakeholders support the objectives of the project?	Existence of City and National government support		
To what extent were the stakeholders involved to participate in the project implementation?	Level of stakeholder participation in the project		
How women's groups were adequately consulted and involved in project design?	Adequately consultations and involvement of women's groups in project design		
How did stakeholder involvement and public awareness contribute to the progress towards achievement of project objectives?	Level of stakeholder participation in the project		
Project Finance and Co-finance			
What is the contribution of cash and in-kind Co-financing to project implementation?	Level of cash and in-kind co-financing relative to expected level	▪ Project documents ▪ UNDP programme staff	▪ Document review ▪ Analysis of Key Informant Interviews
To what extent is the project leveraged additional resources for Co-Financing?	Confirmed Sources of Co-Financing	▪ Project documents ▪ Focal persons of municipalities UNDP programme staff	
Monitoring & Evaluation: design at entry (*), implementation (*), and overall assessment of M&E			
What was the quality of M&E design at entry?	Level of quality of M&E design at entry	▪ TE Team Assessment and ratings	▪ Document review
What was the quality of M&E implementation	Level of quality of M&E implementation		
What is the quality of Overall Quality of M&E	Level of quality of Overall Quality of M&E		
UNDP implementation/oversight (*) and Implementing Partner execution (*), overall project implementation/execution (*), coordination, and operational issues			
What is the level of Quality of UNDP Implementation/Oversight on a 1-6 point scale satisfactory?	Level of quality Implementation/Oversight	▪ TE Team Assessment and ratings	▪ Document review
What is the level of Quality of Implementing Partner Execution on a 1-6 point scale satisfactory?	Level of quality Implementing Partner Execution		
What is the level of Overall quality of Implementation/Oversight and Execution on a 1-6	Level of overall quality of Implementation/Oversight and		

point scale satisfactory?	Execution		
Risk Management, including Social and Environmental Standards (Safeguards)			
To what extent is the Risk Management, including Social and Environmental Standards (Safeguards) managed in the project?	Level of commitment to mainstream social and environmental sustainability in the project.	▪ Project documents ▪ UNDP programme staff ▪ Government Officers at National and City level	▪ Document review ▪ Analysis of Key Informant Interviews
How were social and environmental risks and impacts avoided, minimized, mitigated and managed during project implementation if any?	Measures used to avoid, minimize, mitigate and manage social and environmental risks		
Impact of COVID-19 on project implementation and beneficiaries.			
What is the impact of COVID-19 on project implementation and beneficiaries?	Intended or non- intended changes brought by COVID-19 on project implementation and beneficiaries?	▪ Project documents ▪ UNDP programme staff ▪ Government Officers at National and City level	▪ Document review ▪ Analysis of Key Informant Interviews
Mitigation measures taken against COVID-19 and its impact.			
Which measures has been put in place to mitigate the impact of COVID-19 on project implementation	Number of measures put in place to mitigate the impact of COVID-19 on project	▪ Project documents ▪ UNDP programme staff ▪ Government Officers at National and City level	▪ Document review ▪ Analysis of Key Informant Interviews
3. PROJECT RESULTS AND IMPACTS			
PROGRESS TOWARDS RESULTS: Achievement of project outcomes against indicators by reporting progress made on each of the 4 outcomes.			
OUTCOME 1: To what extent have the project outcome 1 been achieved towards terminal target?	Progress made towards indicator 1	▪ Project documents, ▪ Project Annual Reports, ▪ GEF Tracking Tool; ▪ UNDP Programme staff ▪ Implementing partners	▪ Document analysis ▪ Stakeholder consultation ▪ Field site visits
OUTCOME 2: To what extent have the project outcome 2 been achieved towards terminal target?	Progress made towards indicator 2		
OUTCOME 3: To what extent have the project outcome 3 been achieved towards terminal target?	Progress made towards indicator 3		
OUTCOME 4: To what extent have the project outcome 4 been achieved towards terminal target?	Progress made towards indicator 4		
Relevance of the project			

To what extent did relevant stakeholders participate in the project formulation? Did the project concept originate from local or national stakeholders, and/or were relevant stakeholders sufficiently involved in project development?	Level of involvement of local and national stakeholders in project origination and development (number of meetings held or inputs of stakeholder project development processes)	▪ UNDP Programme staff ▪ Local and national stakeholders ▪ Project documents ▪ Local community or Compost users ▪ Cities policy documents, strategies and development plans ▪ Project Progress Reports ▪ Mid-term Evaluation Report	▪ Analysis of Field visit interviews ▪ Document review ▪ Analysis of Focus Group discussions
Extent to which the project was formulated according to the needs and interests of all targeted and/or relevant stakeholder group Were the project outputs, objectives, outcomes relevant to the needs and priorities of the real project beneficiaries?	Consistency of outputs, objectives, outcome with needs and priorities of the real project beneficiaries		
Do the project objectives/ outcomes fit within the Cities policy priorities and strategies at City level?	Coherence between project objective or outcomes and Cities policy priorities and strategies		
Were the inputs and strategies identified appropriate and adequate to achieve the results?	Adequacy and appropriateness of the project Inputs and Strategies		
Effectiveness of the project			
To what extent were expected project outcomes/ objectives, GEF strategic priorities achieved?	Level of achievement of expected outcomes/ objectives achieved?	▪ Project Progress Reports ▪ UNDP programme staff ▪ Mid-term Evaluation Report ▪ UNDP programme staff ▪ Focal persons of municipalities and MUDC ▪ Mid-term Evaluation Report	▪ Document review ▪ Review of Key Informant Interviews
What are the key factors contributing to project success or underachievement?	Key factors contributing to project success or underachievement?		
Have the planned outputs been produced? Have they contributed to the project outcomes and objectives?	Level of project implementation progress relative to expected level at end of project. Existence of logical linkages between project outputs and outcomes		
Are the anticipated project outcomes likely to be achieved? Are the outcomes likely to contribute to the achievement of the project objective and impact?	Existence of logical linkages between project outcomes and impacts		
Are impact level results likely to be achieved?	Existence of logical linkages between project outcomes and impacts. Level of progress through the project's Theory of Change		
What were some of the main challenges/constraints faced during project implementation?	Challenges hindering project success identified		

To what extent has project contributed to gender equality, the empowerment of women and a human rights-based approach? How has gender responsive and human rights-based approach been incorporated in project design & implementation?	-Gender equality, empowerment of women, human rights-based approach and gender responsiveness enhanced by the project.		
Efficiency of the project			
To what extent was the project efficient and economical in use of financial and human resources and strategic allocation of resources (funds, human resources, time, and expertise) to achieve outcomes?	-Adequacy of financial management, HR procedures (in line with UNDP, national policies and procedures). -Coordination and time management -Financial delivery rate vs. expected rate	▪ Work plans ▪ Project documents ▪ UNDP programme staff ▪ Project documents	▪ Document review ▪ Analysis of Key Informant Interviews
Was the NAMA COMPOST project cost-effective?	-Adequacy of financial management, HR procedures (in line with UNDP, national policies and procedures). -Coordination and time management		
Is the project implementation approach efficient for delivering the planned project results?	Quality and adequacy of implementation structures and mechanisms for coordination, communication, human resources available, Extent and quality of engagement with implementing partners, Quality and adequacy of project monitoring mechanisms (oversight bodies' and timely reporting)		
Is the project implementation delayed? If so, has that affected cost-effectiveness? Were outputs been delivered in a timely manner? If not, what hindered timely delivery of outputs?	Project milestones in time Planned results affected by delays Required project adaptive management measures related to delays		
How efficient was the project management structure as outlined in the project document in generating the expected results?	Resources pulled in an innovative manner for great synergy		
Overall project outcome			
What is the overall project outcome on project results (Relevance, effectiveness, efficiency) on a 1-6 point scale satisfactory?	Level of overall project outcome on project results.	▪ TE Team Assessment and ratings	▪ Document review
Sustainability of the project			
To what extent are the outcomes of the projects likely to be sustained after the termination of this project? What is the likelihood of continuation and	Number of measures put in place to ensure project sustainability after termination.	▪ Project Progress Reports ▪ UNDP programme staff ▪ Mid-term Evaluation	▪ Document review ▪ Analysis of Key Informant

sustainability of project outcomes and benefits after completion of the project?		Report	Interviews
What strategies were put in place to ensure that, the project outcomes will remain sustainable?	Numbers and adequacy of strategies for project sustainability		
Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?	Number of capacity building programmes conducted to stakeholders		
Financial			
What is the likelihood that financial resources will be available once the GEF assistance ends to support the project?	-Level of expected financial resources available to support maintenance of project benefits. -Potential for additional financial resources to support maintenance of project benefits	▪ Project Progress Reports ▪ UNDP programme staff ▪ Project documents	▪ Document review ▪ Analysis of Key Informant Interviews
Environmental			
Are there any environmental factors that pose a threat or can undermine the future flow of project benefits of the project?	Existence of environmental risks factors to project benefits	▪ Project Progress Reports ▪ Project documents ▪ UNDP programme staff	▪ Document review ▪ Analysis of Key Informant Interviews
Social-political			
Are there any social or political risks that can undermine the longevity of project outcomes? Is there stakeholder awareness that was created in support of this project?	Existence of socio-political risks to project benefits	▪ Project Progress Reports ▪ Project documents ▪ UNDP programme staff	▪ Document review ▪ Analysis of KII ▪ FGD with beneficiaries
Institutional framework and governance			
Do the legal frameworks, policies, governance structures and processes pose any threat to the continuation of project benefits?	Existence of institutional and governance risks to project benefits	▪ Project Progress Reports ▪ Project documents ▪ UNDP programme staff	▪ Document review ▪ Analysis of Key Informant Interviews
Overall likelihood of sustainability			
What is the overall likelihood on sustainability (Financial, Environmental, Social-political and Institutional framework and governance) on a 1-6 point scale satisfactory?	Level of overall likelihood on sustainability.	▪ TE Team Assessment and ratings	▪ Document review

Country Ownership			
Were the relevant National and City Administrators from government involved in project implementation?	Level of participation of National and City Administrators	▪ Project documents ▪ UNDP programme staff ▪ Government Officers at National and City level ▪ Project documents	▪ Document review ▪ Analysis of Key Informant Interviews
Has the government approved policies and/or modified regulatory frameworks in line with the project's objectives?			
Did the project concept have its origin within the National sectoral and development plans?			
Have outcomes from the project have been incorporated into the national sectoral and development plans?			
Gender equity & Women Empowerment			
How did the project contribute to gender equality and women's empowerment?	Level of progress of gender action plan and gender indicators in results framework -Closing gender gaps in access to and control over resources - Improved participation of women - Improved decision-making of women	▪ Project documents ▪ UNDP Programme staff ▪ Government Officers at National and City level ▪ Local community ▪ Compost users	▪ Analysis of Field visit interviews ▪ Analysis of Focus group discussion
To what extent have disadvantaged and marginalized groups benefited (disaggregated by sex and other considerations) from the project?	Existence of benefits accrued from the project to the marginalized groups benefited (disaggregated by sex and other considerations)		
In what ways did the project's gender advance or contribute to the project's outcomes?	Existence of logical linkages between gender results and project outcomes and impacts		
Cross-cutting issues			
To what extent has the project mainstreaming other UNDP cross- cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, and capacity development, South-South cooperation, knowledge management, volunteerism as applicable) to project design and implementation?	UNDP cross- cutting issues mainstreamed in project design and implementation	▪ Progress monitoring reports ▪ Project documents ▪ UNDP Programme staff	▪ Analysis of Field visit interviews ▪ Analysis of Focus group discussion ▪ Analysis of Key Informant Interviews
Progress to Impact			

What is the progress made towards the long-term impact outlined in the project's Theory of Change? (both positive and negative change). To what extent has changes are taking place? What are the changes in in gender equality? (Access to and control of resources, decision-making power)	Contributions to: -reduction in GHG emission, -reduction of waste discharge, change in population of endangered species, -changes in policy, frameworks. -changes in capacities (awareness, knowledge and skills) -changes in socio-economic status (income, health, well-being)	▪ Project documents ▪ UNDP programme staff ▪ Focal persons from municipalities and MUDC ▪ Local community ▪ Compost users ▪ Progress reports	▪ Document review ▪ Analysis of Key Informant Interviews ▪ Analysis of Focus Group discussions
To what extent has the project contributed at National and city level on ISWM and UGI	National and city Administrative level registering increased greater use of ISWM and UGI initiatives		
What difference has the project made to or impacted on the beneficiaries?	Project beneficiaries registering increased benefits from the project		
Impact of COVID -19 on achievement			
What is the impact of COVID-19 on project achievements in the project?	Intended or non- intended changes brought by COVID-19 pandemic on achievements in the project?	▪ Project documents ▪ UNDP programme staff ▪ Government Officers at National and City level	▪ Document review ▪ Analysis of Key Informant Interviews

ANNEX D: KII GUIDE FOR UNDP AND IMPLEMENTING PARTNERS

Target respondents: UNDP Programme staff, Ministry of Urban Development and Construction, Municipalities and Federal level partners.

Name of the Interviewee		**Date**	
Position/Title		**Time**	
Department /Section/ Unit		**Persons present**	
Location/ town/city			

GENERAL

Have you been able to regularly visit project areas in the municipalities (city and towns) to see the project progress? Please share any constraints that you have faced in this regard.

1. PROJECT DESIGN/FORMULATION

1.1 Project Design

a) Was the project linked with and in line with UNDP priorities and strategies for the country?
b) Does the project's objective align with the National government development priorities on ISWM and UGI within urban systems at National level?
c) Does the project objective fit GEF strategic priorities?
d) Was the objectives alignment with UNDP and GEF strategic priorities?
e) How was the project aligned with national policies and strategies on gender equality?
f) Is the project design appropriate to address substantial problems that the project is intended to address? How useful are the project out puts to the needs of the beneficiaries?

1.2 Results/Logical Framework

a) How clear, practicable and feasible were the project's objectives and project components within its time frame?
b) How SMART were the indicators in the Results Framework (Specific, Measurable, Attributable, Relevant, Time-bound/Timely/Tractable/Targeted)
c) How consistent were the outcomes and outputs with the Theory of Change (ToC)?
d) How did the project aim to capture broader development impacts (i.e. greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in project cities and towns in alignment with the National Growth and Transformation Plan for urban sector).

1.3 Assumptions and risks

a) Are the key assumptions relevant to the achievement of the COMPOST Project likely to be?

b) How were the assumptions and risks well-articulated in the project document? How did they help to determine activities and planned outputs?
c) What are the key risks and barriers that remain to achieve the project objective of the Ethiopia NAMA COMPOST Project?

1.4 Lessons from other projects, Stakeholders' participation & Linkages established

a) How lessons from other relevant projects were properly incorporated in the project design?
b) How were stakeholders who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources taken into account during project design processes?
c) How were the partnership arrangements properly identified and roles and responsibilities? negotiated prior to project approval?
d) How were linkages established with other complementary interventions?
e) Was there planned project coordination with other relevant GEF-financed projects and/or other initiatives, and how did they function?

2. PROJECT IMPLEMENTATION

2.1 Adaptive Management (changes to project design outputs during implementation)

a) What significant changes did the project undergo as a result of recommendations from the Mid-Term Review?
b) To what extent has the project interventions experienced any significant changes (Plans, strategies, logical framework) during execution? What were the implications of these changes to the project outcomes?
c) To what extent did the project adapt its approach to provide appropriate response to specific changes in project design and project outputs during implementation?
d) To what extent was project adapted its approach to provide appropriate response to specific Changing Context (Political, Economic, Social-Cultural, Technological and Environmental) during project implementation?

2.2 Actual stakeholder participation and partnership arrangements

a) How did the project management leverage the necessary and appropriate partnerships with direct and tangential stakeholders?
b) How did local and national government stakeholders support the project objectives?
c) To what extent were the stakeholders involved to participate in the project implementation?
d) How women's groups were adequately consulted and involved in project design?
e) How did stakeholder involvement and public awareness contribute to the progress towards achievement of project objectives?

2.3 Project Finance and Co-finance

a) What is the contribution of cash and in-kind Co-financing to project implementation?
b) To what extent is the project leveraged additional resources for Co-Financing?

2.4 Risk Management, including Social and Environmental Standards (Safeguards)

a) To what extent is the Risk Management, including Social and Environmental Standards (Safeguards) managed in the project?
b) How were social and environmental risks and impacts avoided, minimized, mitigated and managed during project implementation if any?

Impact of COVID-19 on implementation and beneficiaries & Mitigation measures

a) What is the impact of COVID-19 on project implementation and beneficiaries?
b) Which measures has been put to mitigate the impact of COVID-19 on project implementation

3. PROJECT RESULTS AND IMPACTS

3.1 Relevance of the project

a) To what extent did relevant stakeholders participate in the project formulation? Did the project concept originate from local or national stakeholders, and/or were relevant stakeholders sufficiently involved in project development?
b) Extent to which the project was formulated according to the needs and interests of all targeted and/or relevant stakeholder group.
c) Were the project outputs, objectives, outcomes relevant to the needs and priorities of the real project beneficiaries?
d) Do the project objectives/ outcomes fit within the policy priorities and strategies at City level?
e) Were the inputs and strategies identified appropriate and adequate to achieve the results?

3.2 Effectiveness of the project

a) To what extent were project outcomes/ objectives and GEF strategic priorities achieved?
b) What are the key factors contributing to project success or underachievement?
c) Have the planned outputs been produced? Have they contributed to the project outcomes and objectives?
d) Are the anticipated project outcomes likely to be achieved? Are the outcomes likely to contribute to the achievement of the project objective and impact?
e) Are impact level results likely to be achieved?
f) What were some of the main challenges/constraints faced during project implementation?
g) To what extent has project contributed to gender equality, the empowerment of women and a human rights-based approach? How has gender responsive and human rights-based approach been incorporated in project design and implementation.
h) What are the best practices that can be scaled up in the next phase of the project?

3.3 Efficiency of the project

a) To what extent was the project efficient and economical in use of financial and human resources and strategic allocation of resources (funds, human resources, time, and expertise) to achieve outcomes?
b) Was the NAMA COMPOST project cost- effective? Specific indications for this?

c) Is the project implementation delayed? If so, has that affected cost-effectiveness? Were outputs been delivered in a timely manner? If not, what hindered timely delivery of outputs?

3.4 Sustainability

a) To what extent are the outcomes of the projects likely to be sustained after the termination of this project? What is the likelihood of continuation and sustainability of project outcomes and benefits after completion of the project?
b) What strategies were put in place to ensure that, the project outcomes will remain sustainable?
c) Do relevant stakeholders have the necessary technical capacity to ensure that project benefits are maintained?
d) What is the likelihood that financial resources will be available once the GEF assistance ends to support the project?
e) Are there any environmental factors that pose a threat or can undermine the future flow of project benefits of the project or jeopardize sustenance of project outcomes?
f) Are there any social or political risks that can undermine the longevity of project outcomes? Is there stakeholder awareness that was created in this project?
g) Do the legal frameworks, policies, governance structures and processes pose any threat to the continuation of project benefits?
h) Are there any social or political risks that can undermine the longevity of project outcomes? Is there stakeholder awareness that was created in support of this project?
i) What is the risk that the level of stakeholder ownership (including ownership by governments/ municipalities and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?
j) Are lessons learned being documented by the Project Team on a continual basis and shared/ transferred to appropriate parties who could learn from the project and potentially replicate and/or scale it in the future.
c) Are required systems/ mechanisms for accountability, transparency, and technical knowledge transfer are in place?

3.5 Country Ownership

a) Were the relevant National and City Administrators from government involved in project implementation?
b) Has the government approved policies and/or modified regulatory frameworks in line with the project's objectives?
c) Did the project concept have its origin within the National sectoral and development plans?
d) Have outcomes from the project have been incorporated into the national sectoral and development plans?

3.6 Gender equity & Women Empowerment

a) How did the project contribute to gender equality and women's empowerment?
b) In what ways did the project's gender advance or contribute to the project's outcomes?

3.7 Cross-cutting issues

a) To what extent has the project mainstreaming other UNDP cross- cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, and capacity development, South-South cooperation, knowledge management, volunteerism as applicable) to project design and implementation?

3.8 Progress to Impact

a) What is the progress made towards the long-term impact outlined in the project's Theory of Change? (both positive and negative change). To what extent has changes are taking place?
b) What are the changes in in gender equality? (Access to and control of resources, decision-making power)
c) To what extent has the project contributed to National and city level ISWM/UGI?
d) What difference has the project made to or impacted on the beneficiaries?
e) What is the impact of COVID-19 on project achievements in the project?

ANNEX E: FGD GUIDE FOR PROJECT BENEFICIARIES

Target respondents: SMEs-compost producers, SWM and Recycling Associations

1. With help from municipalities, invite a group of 4-8 knowledgeable, active and respected persons from the compost associations other project beneficiaries at a place convenient to them. The participants should include selected people who have been involved with the NAMA COMPOST Project activities with equal representation of both women and men. Where possible, invite more women, especially female project beneficiary members to the FGD and introduce yourself and your companions.

2. Brief them about the rules of the FGD that: i) All the participants should take part in the discussions. ii) Everyone should be allowed to describe her/ his point of view fully and everyone's opinion should be respected iii) No one should try to dominate the discussion.
3. Explain each question in local language with examples. After asking a question, let the group members discuss the question and responses with each other. Ensure that most of the members are participating in discussions. Encourage difference of opinion, as some members may hide opinions for the fear of community backlash after the FGD. The discussion should not focus too much on numbers; rather perceptions, opinions, fears, motivations, reactions, and commitments of the FGD.
4. Read the following introduction to the audience: "This FGD session has been requested as part of TE of the NAMA COMPOST Project. Your feedback for the TE will help us improve our work on potential future project. We assure you that any information you share will be confidential and strictly used for the purpose of this evaluation. This session may take about an hour of your time."
5. Please write "Not Applicable" and the serial question number if a question does not apply to a specific town/ association. For clarity, give a reason why it is not applicable.

Town		**Date**	
Kebele		**Time**	
Village		**Persons present From the project**	

Participants Information

S/No.	Designation/position	Age	Gender
1			
2			
3			
4			
5			

GENERAL

Have you heard about the **NAMA COMPOST Project and/ UNDP**? What do you know about the project and how did you come to know about it?

1. PROJECT DESIGN/FORMULATION

a) Is **NAMA COMPOST** Project activities and works in line with your development needs/priorities to cope with and overcome livelihood and conflict related challenges?
b) What other important development priorities that the project has not taken care of?
c) Do project activities respond to the needs of women?
d) How the project could have helped you better in beautifying your town and diversifying your livelihood options and creating employment opportunities? What could be done better?

2. PROJECT IMPLEMENTATION

2.1 Management Arrangements

a) What is the process for selection of beneficiaries of the project interventions?
b) Were the project interventions completed in time? If not, why not?
c) How did project staff from the town administration and municipality interact with you? Were you allowed to participate and ask questions?
d) How do you manage your association/ SMEs (if any)?
e) How has been the participation of women in training and project related decisions?

2.2 Project-level Monitoring and Evaluation Systems

a) What system is used to collect and process monitoring and progress data from the

town/ kebele/ association/ MSEs? Who reports progress and implementation issues to regional or Woreda level DPFSA?

b) Has project staff come to your town at appropriate times to monitor work in progress? How does the town /project focal persons follow-up on monitoring and evaluation issues highlighted by your association?
c) Can monitoring of selection of beneficiaries, selection of sub-projects, sub-project location, and distribution of project inputs improved? Please explain?

3. PROJECT RESULTS AND IMPACTS

3.1 Relevance

a) How do you view ISWM and UGI approaches work done in the town?
b) Did poor women benefit from livelihood options created by the project?
c) Were the project outputs, objectives, outcomes relevant to the needs and priorities of the real project beneficiaries?
d) Are the livelihood options likely to increase income of women and their households? How have men benefit from these interventions?

3.2 Effectiveness

a) Tell us some SMEs established with support by NAMA COMPOST Project. Which ones are more successful than others? How? Specific examples.
b) To what extent have MSEs been linked with financing institutions to support so that they can access loan for their business? Any practical examples for this?
c) Has awareness creation activities and/ events improved in the town? Please provide examples of the improvements/likely improvements in the lives of people.
d) Identify any possible, legal, cultural or religious constraints on women participation in the project.
e) What can the project do to enhance its gender benefits?
f) Is there any potential negative impact on gender equality and women empowerment? What can the project do to mitigate this?
g) Where has the project fallen short of expectations in terms of improving ISWM practices and increasing UGI in the town? What are the barriers to achievement?
h) What has been done under the project in your town/kebele? Which project activities were important to you and why?

3.3 Sustainability

a) Do the associations have sufficient technical know-how to maintain and operate the socioeconomic infrastructure works on their own without technical help from the municipality or project?
b) Has anyone in your town/ Kebele received any training from NAMA COMPOST Project to gain technical skills required in this project? What specific trainings and support (compost production, skill training, and material support) was given?
c) Does this training have any link with local future needs/development plans for you and for the town?
d) Have you received any training or materials for your ISWM and UGI approaches? Please explain?
e) Are there any social or political risks that can undermine the longevity of project outcomes? Is there stakeholder awareness that was created in this project?

ANNEX F: PROJECT LOGICAL/RESULTS FRAMEWORK

Intended Outcome as stated in the UNDAF/Country Programme Results and Resources Framework: *By 2020, the governance systems, use of technologies and practices, and financing mechanisms that promote low carbon climate-resilient economy and society are improved at all levels.*					
Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets: *UNDAF Outcome 2: By 2020 private-sector driven industrial and service sector growth is increasingly inclusive, sustainable, competitive and job-rich.* *UNDAF Outcome 5: By 2020 key Government institutions at federal and regional levels, including cities, are able better to plan, implement and monitor priority climate change mitigation and adaptation actions and sustainable resource management.* *UNDAF Outcome 13: By 2020, national and sub-national institutions apply evidence-based, results-oriented and equity-focused decision-making, policy formulation, programme design, monitoring, evaluation and reporting.*					
Applicable Outputs from the 2014 – 2017 UNDP Strategic Plan: *Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.*					
Applicable Output Indicators from the UNDP Strategic Plan Integrated Results and Resources Framework: *Output 1.3 indicator 1.3.1: Number of new partnership mechanisms with funding for sustainable management solutions of natural resources, ecosystem services, chemicals and waste at national and/or subnational level.* *Output 1.3 indicator 1.3.2: a) Number of additional people benefitting from strengthened livelihoods through solutions for management of natural resources, ecosystems services, chemicals and waste; b) Number of new jobs created through solutions for management of natural resources, ecosystem services, chemicals and waste.*					
	Objective and Outcome Indicators	***Baseline[84]***	***Mid-term Target***	***End of Project Target***	***Assumptions[85]***
Project Objective: *To promote significantly greater use of Integrated Solid Waste Management (ISMW) and Urban Green Infrastructure (UGI) approaches in Ethiopian cities and towns in alignment with the National Growth and Transformation Plan for the urban sector*	*Direct project CO_2 emission reductions from the range of interventions proposed by the project, kilotonnes CO_2 [86]*	*0*	*50*	*438 [87]*	*Continued political commitment to integrate best practices for ISWM and UGI into development planning and implementation.* *The successful implementation of the project is premised on the assumptions that: (a) waste sorting is effective and results in good-quality compost feedstock; (b) the organic feedstock can be composted and is not contaminated; and (c) farmers and municipal governments agree to use the compost.* *Project MRV reports are completed on specific project interventions from the 6 cities, including organic waste diversion from landfills, urban forestry and use of renewable biomass for fuel wood.*
	Cumulative weight of organic waste diverted from landfills for composting, tonnes[88]	*0*	*60,100*	*404,000*	*Project MRV reports are completed on specific project interventions from the 6 cities, including organic waste diversion from landfills.* *High level of uptake of organic waste sorting by households.*
	Number of gender-disaggregated jobs created from the establishment of an enhanced compost value chain[89]	*0*	*205 (of which at least 50% for women)*	*744 (of which at least 50% for women)*	*Project reports are completed on environmental and social impact analysis of project interventions.*
Outcome 1 *Regulatory and legal framework, institutional and coordination mechanisms, and tools are established for supporting national policy environment for integrating ISWM and UGI within urban systems*	*Number of transposed standards (1 SWM and 1 UGI) for use by local and regional governments*	*0*	*10 [90]*	*10*	*Support for transposed standards received at all levels of government (i.e. federal, regional bureaus and municipalities).* *Documentation for transposed ISWM and UGI standards for 6 cities and 4 regional governments.*

	Number of households source-sorting domestic waste[91]	*0*	*45% of households in each target city/town (~163,000 households)*	*90% of households in each target city/town (~355,000 households)*	*Local government ordinances define incentives for source-sorting of waste at households.*
	Tonnes of organic waste produced according to adopted standards	*0*	*~22,500 tonnes*	*~45,000 tonnes*	*Organic compost standards*
Outcome 2 *A market-based system is developed, and participating micro and small enterprises (MSEs) are supported professionally to ensure financial sustainability of compost production and utilisation*	*Number of established MSEs in the ISWM-UGI value chain*	*0*	*6*	*12* [92]	*Proof of the existence of legal MSE business licences within the ISWM-UGI supply chain.*[93] *ISWM and UGI curricula of TVET institutions and local universities and colleges are adopted.*
	Value (US$) of long-term contracts between composting MSEs and public entities and private companies for the supply of compost and non-organic recycled waste[94]	*0*	*US$ 2.2 million*	*US$ 3.6 million*	*Long-term contracts between composting MSEs and public entities and private companies for the supply of compost and non-organic recycled waste.*
	Number of established voluntary carbon offset agreements with private companies to support ISWM and UGI initiatives	*0*	*2*	*6*	*Official documentation of voluntary offset scheme Registry that will be managed by MEFCC, and agreements to support ISWM and UGI initiatives.*
Outcome 3 *A NAMA is designed and implemented to catalyse transformation of integrated urban systems to generate large emission reductions*	*Number of established standardised baselines for calculating emission reductions*	*0*	*1*	*3* [95]	*Availability of reliable and accurate data.* *Documentation of the 3 established standardised baselines and MRV mechanisms.*
	Gender-disaggregated population covered by a registered UNFCCC NAMA for national ISWM/UGI initiatives[96]	*0*	*0*	*Total population of the 6 cities/towns in 2021 (approximately 1.97 million)*[97]	*NAMA registration is documented.* *There are local experts with sufficient expertise and understanding of concepts to develop the NAMA.*
Outcome 4 *Operational urban systems that integrate ISWM and UGI with quantified GHG emission reductions within the NAMA framework*	*Capacity (tonnes of compost produced per year) of operational composting plants*[98]	*0*	*22,500 tonnes*	*45,000 tonnes*	*Physical verification of operational plants.*
	Area (ha) of degraded sites transformed into green space[99]	*0*	*1*	*4* [100]	*Physical verification of green space transformed.*
	Number of hectares of reforested degraded land supported by compost-grown seedlings produced by nurseries	*0*	*15,500*	*33,309*	*Reports on peri-urban reforestation and firewood plantation programmes in each of the 6 cities.*

ANNEX G: TE MISSION ITINERARY OF FIELD VISITS

TE mission itinerary					
Date and time	**Organization**	**Stakeholder**	**Person to Meet**	**Contact**	**Activity**
Monday 4 October	Hawassa	Implementer	• Focal persons	TBC	FGDs/ KIIs
1:30 – 5:30 PM			• City officials and		
Tuesday 5 October			• Beneficiaries		FGDs/ KIIs
8:30 – 12:00 PM					
Tuesday 5 October			• Field Visit		Observation
2:00 – 5:00 PM					
Wednesday 6 October					
6:30AM – 9:30AM Travel from Hawassa by car to Adama					
9:45 – 12:00 PM	Adama	Implementer	• Focal persons	TBC	FGDs/ KIIs
			• City officials and		
Wednesday 6 October					
1:30 – 5:00 PM			• Focal persons		FGDs/KIIs
			• City officials and experts		
Thursday 7 October			• Beneficiaries		FGDs/KIIs
8:30 – 12:00 PM			• Field Visit		Observation
Thursday 7 October					
1:30 – 4:00 PM			• Field Visit		
4:10 – 6:00 PM	Drive to Bishoftu				
Friday 8 October					
8:30 – 12:00 PM	Bishoftu	Implementer	• Focal persons	TBC	FGDs/ KIIs
			• City officials and		
Friday 8 October					
1:30 – 5:00 PM			• Focal persons		FGDs/KIIs
			• City officials and		FGDs/KIIs
Saturday 8 October		Implementer			
8:30 – 12:00 PM			• Beneficiaries		
			• Field visit		Observation
Saturday 8 October					
2:00 – 3:30 PM	Drive to Addis Ababa				
Monday 10 October 3:00 – 4:00 PM Filight to Bahir Dar					
Tuesday 12 October	Bahir Dar	Implementer	The same as above		FGDs/KIIs
8:00 – 6:00 PM					
Wednesday 13 October					KIIs/ Field observation
8:00 – 12:00 PM					
Wednesday 13 October 2:00 – 3:00 PM Flight to Addis Ababa and from 5:00-6:00PM from Addis to Dire Dawa					
Thursday 14 October	Dire Dawa		The same as above		KIIs, FGDs/ observation
8:00 – 4:00PM					
Thursday 14 October 5:00 – 6:00 PM Flight from Dire Dawa to Addis Ababa					
Friday 15 October	Addis Ababa	Funding and implementin	Steering Committee Members	TBC	Group discussions
8:30 – 12:00 PM					
Friday 15 October					
2:00 – 3:30 PM	Addis Ababa	Funding agency	UNDP	TBC	Debriefing

ANNEX H: UNEG CODE OF CONDUCT FOR EVALUATORS

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

TE Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of International Evaluation Consultant**:** **Dr Samuel Kimwele Mutukaa** .

Name of Consultancy Organization (where relevant): _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Kitui *(Place)* on **09/11/2021** *(Date)*

Signature: 

Evaluators/Consultants:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreetly to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all stakeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
6. Are responsible for their performance and their product(s). They are responsible for the clear, accurate and fair written and/or oral presentation of study limitations, findings and recommendations.
7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

TE Consultant Agreement Form

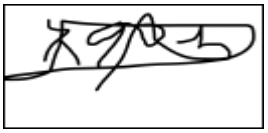
Agreement to abide by the Code of Conduct for Evaluation in the UN System:

Name of National Evaluation Consultant: **Mr Amha Ermias**

Name of Consultancy Organization (where relevant): _____

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at Addis baba *(Place)* on **09/11/2021** *(Date)*

Signature: 

ANNEX I: UNDP-GEF TE AUDIT TRAIL

The following comments were received from the draft TE report review team of NAMA COMPOST Project (UNDP Project ID-PIMS No. 5541):

No.	Institution	Main comment/Feedback on the draft TE report	TE team response and actions taken
1	MUDC	Time required by the MUDC to develop a sustainability plan, scale up the project and complete project remaining activities	Recommendation for cost extension
2	MUDC	Definition of MTE, PSC and UNEG abbreviations used in the report	Defined and inserted in the list of acronyms
3	MUDC	Unclear total tons of Co2 emission reduction from the greenery and composting activities as a result of the NAMA COMPOST project	The project achieved a total of 413 tons of CO2 emission reduction with (293 kilo tCo2 from the greenery and 120-kilo tons of Co2 from compost)
4	MUDC	Time for establishing small factories in the cities to process local wastes rather than transporting crushed plastic wastes to Addis Ababa by March 2022	Timeline changed to continuous activity
5	MUDC	Completion of compost sheds in Hawassa city output 2.1	All compost sheds including (storage, office, toilet, and shower) were done except the main compost shed to function using the turner machine.
6	UNDP	Missing recommendations from the ESIA report done during the project Overall quality of M&E	Implement environmental monitoring management systems and maximum safety and health procedures in compost sheds during collection, segregation and process of compost.
7	UNDP	Unclear impact of COVID-19 on the project implementation and beneficiaries	MSEs engaged in recycling and composting lost market and their livelihood affected. The city became dirty because MSEs stopped collecting wastes
8	UNDP	Total number of KIIs and FGDs conducted during data collection.	A total of 19 KIIs and 16 FGDs were carried out throughout the visited cities.
9	UNDP	Limitations from COVID 19 perspective, and precautionary measures taken.	Restrictions on interactions. This was overcome by restricting large number of participants, wearing masks, applying no touch policy & virtual meetings.
10	UNDP	The contribution of project outcomes towards UNDAF Outcome 13: UNDP Strategic Plan Output: Output 1.3 and UNSDCF 2020- 2025 outcome.	Comments addressed under section 4.3.2 on Relevance
12	UNDP	What have changed as a result of the training MSEs in ISWM and UGI?	Leading to increased knowledge and skills in ISWM and UGI approaches

ANNEX J: TE REPORT CLEARANCE FORM

TE Report Reviewed and Cleared By:

Commissioning Unit

Name: _____

Signature: _____ **Date:** _____

UNDP-GEF Regional Technical Advisor

Name: _____

Signature: _____ **Date:** _____

ANNEX K: TE RATING SCALES

ANNEX K-1: Ratings for Progress towards Results

Ratings for Progress Towards Results		**Description** (one rating for each outcome and for the objective)
6	Highly Satisfactory (HS)	The objective/outcome is expected to achieve or exceed all its end-of-project targets, without major shortcomings. The progress towards the objective/outcome can be presented as "good practice".
5	Satisfactory (S)	The objective/outcome is expected to achieve most of its end-of-project targets, with only minor shortcomings.
4	Moderately Satisfactory (MS)	The objective/outcome is expected to achieve most of its end-of-project targets but with significant shortcomings.
3	Moderately Unsatisfactory (HU)	The objective/outcome is expected to achieve its end-of-project targets with major shortcomings.
2	Unsatisfactory (U)	The objective/outcome is expected not to achieve most of its end-of-project targets.
1	Highly Unsatisfactory (HU)	The objective/outcome has failed to achieve its midterm targets, and is not expected to achieve any of its end-of-project targets.

ANNEX K-2: Ratings for Implementation/ Oversight & Execution

Ratings for Implementation/ Oversight & Execution		**Description** (one overall rating)
6	Highly Satisfactory (HS)	Implementation of all seven components – management arrangements, work planning, finance and co-finance, project-level monitoring and evaluation systems, stakeholder engagement, reporting, and communications – is leading to efficient and effective project implementation and adaptive management. The project can be presented

		as “good practice”.
5	Satisfactory (S)	Implementation of most of the seven components is leading to efficient and effective project implementation and adaptive management except for only few that are subject to remedial action.
4	Moderately Satisfactory (MS)	Implementation of some of the seven components is leading to efficient and effective project implementation and adaptive management, with some components requiring remedial action.
3	Moderately Unsatisfactory (MU)	Implementation of some of the seven components is not leading to efficient and effective project implementation and adaptive, with most components requiring remedial action.
2	Unsatisfactory (U)	Implementation of most of the seven components is not leading to efficient and effective project implementation and adaptive management.
1	Highly Unsatisfactory (HU)	Implementation of none of the seven components is leading to efficient and effective project implementation and adaptive management.

ANNEX K-3: Ratings for Sustainability

Ratings for Sustainability		**Description** (one overall rating)
4	Likely (L)	Negligible risks to sustainability, with key outcomes on track to be achieved by the project’s closure and expected to continue into the foreseeable future
3	Moderately Likely (ML)	Moderate risks, but expectations that at least some outcomes will be sustained due to the progress towards results on outcomes at the Midterm Review
2	Moderately Unlikely (MU)	Significant risk that key outcomes will not carry on after project closure, although some outputs and activities should carry on
1	Unlikely (U)	Severe risks that project outcomes as well as key outputs will not be sustained
	Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability

ANNEX K-4: Outcome Ratings for Relevance, Effectiveness and Efficiency

Outcome Ratings for Relevance, Effectiveness, Efficiency		**Description** (one overall rating)
6	Highly Satisfactory (HS)	Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings
5	Satisfactory (S)	Level of outcomes achieved was as expected and/or there were no or minor shortcomings
4	Moderately Satisfactory (MS)	Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.
3	Moderately Unsatisfactory (MU)	Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings
2	Unsatisfactory (U)	Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.
1	Highly Unsatisfactory (HU)	Only a negligible level of outcomes achieved and/or there were severe shortcomings
	Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements

ANNEX K-5: Ratings for Monitoring and Evaluation

Ratings for Monitoring & Evaluation		**Description** (one overall rating)
6	Highly Satisfactory (HS)	There were no short comings; quality of M&E design/implementation exceeded expectations
5	Satisfactory (S)	There were minor shortcomings; quality of M&E design/implementation met expectations
4	Moderately Satisfactory (MS)	There were moderate shortcomings; quality of M&E design/implementation more or less met expectations
3	Moderately Unsatisfactory (MU)	There were significant shortcomings; quality of M&E design/implementation was somewhat lower than expected
2	Unsatisfactory (U)	There were major shortcomings; quality of M&E design/implementation was substantially lower than expected
1	Highly Unsatisfactory (HU)	There were severe shortcomings in M&E design/implementation
	Unable to Assess (UA)	The available information does not allow an assessment of the quality of M&E design/implementation.

ANNEX L: LIST OF PERSONS INTERVIEWED

Place	**Name**	**Institution**	**Responsibility**
Addis Ababa	Girma Workie	UNDP-GEF Compost	Project Manager
	Ketema Tessema	UNDP-GEF Compost	UGI Technical Officer
	Semere Gebretsadik	UNDP-GEF Compost	ISWM Technical Officer
	Tigist Alemu	MUDC	NAMA Project Director
	Habtamu Shewalema	Ministry of Finance, Economic Cooperation Unit	Team Leader
Hawassa	Urge Alemu	NAMA-COMPOST Focal Person	Hawassa Municipality
	Amelework Gebru	SWM Expert	Sanitation and Beautification Office
	Teklu Dera	SWM Expert	Sanitation and Beautification Office
	Belay Hameso	EP Office Head	EP Office
	Tariku Tamene	Vice Head	Urban Development and Construction
	Tamir Thomas	Vice Head	Finance and Economic Development Office
	Matheos Fikru	REE compost producers Association	Supervisor
	Henok Dangacho	Hawassa Solid Waste Management and Recycling Association	General Manager
	Marcos Merkene	Lembo Green Development Association	General Manager
	Teshale Wonte Guja	Urban Development &	Deputy

		Construction Bureau	Manager/Coordinator of UIID and NAMA
Bishoftu	Kokeb Aklilu	Vice manager	Adama Municipality
	Muluneh Dabessa	Urban Greenery Tam Leader	Adama Municipality
	Lemma Asfaw	Office Head	EPFCCA
	Mahari Seid	Expert	Urban Agriculture
	Diribe Beyeche	Expert	Adama Municipality
	Tsehay Getahun	NAMA-COMPOST Focal Person	Adama Municipality
	Ferido Nuru	Expert	Adama Municipality
	Kebede Gonfa	Bishoftu Municipality	Deputy manager
	Alemayeh Sileshi	Department Head	Bishoftu, Municipal Office
	Getu Kassa	Landfill Manager	Bishoftu, Municipal Office
	Elsabet Gebresilase	Accountant	Municipal Office
	Genet Geresu	Solid waste expert	Municipal Office
	Dinfu Chala	NRM	Municipal Office
	Damake Eshete		Municipal Office
	Adissu Melka	NAMA-COMPOST Focal Person	Bishoftu Municipality
	Adisu Guta	Bishoftu Compost Shade	Engineer of compost shed
	Guluma Feyessa	Bishoftu Compost Shade	Leader
	Sisay Nigatu	Bishoftu Compost Shade	Leader
	Workneh Yami	Bishoftu Compost Shade	Leader
Bahir Dar	Teshome Nigatu	Park Team Leader	
	Abebu Woldemichael	EP Team Leader	Environmental Protection
	Asnakew Tera	SWM Expert	Sanitation and Beautification Office
	Awoke Fenta	Head	Sanitation and Beautification Office
	Simegnesh Yimer	NAMA-COMPOST Focal Person	Sanitation and Beautification Office
Dire Dawa	Azeb Bekele	Nursery Development and Expansion Expert	Municipal Office
	Shimeles Zewude	Education and Training Expert	Sanitation and Beautification Office
	Yalew Assefa	NAMA-COMPOST Focal Person	
MSEs Members engaged in SWM and UGI			
Hawassa	Matiwos Fikre	Green R.E. E	
	Addisu Lembebo	Faya Fole SWM Association	
	Meseret Digalo	Hawassa Wubet	
	Kindyihun Zemedkun	Shalom	
	Hana Mamo	Shalom	
	Binyam Mesele	Green R.E.E	
	Abraham Tadesse	Lewut Lesira	
	Matiwos Fikre	Green R.E. E	
	Abraham Tadesse	Faya Fole SWM Association	
Adama	Debe Korma	Debe Korma Forest Development Association	
	Belele Gudeta	Debe Korma Forest	

		Development Association	
	Degefa Dami	Debe Korma Forest Development Association	
	Eshete Alma	Debe Korma Forest Development Association	
	Jaba Dar	Debe Korma Forest Development Association	
Bishoftu	Miteek Gulima	Hora	
	Sisay Negada	Hawi Boru	
	Tesfaye Bedada	Hora	
	Estifanos Maru	Nagenga	
	Zenebech Girma	Nagenga	
	Fasil Yimer	Mikesa and Netsanet MSE	
Bahir Dar	Helen Girma –	Kebele 05 Hibret Lelimat MSEs	
	Mekuriaw Habte	Mekuriaw, Alebel and Friends	
	Emenat Jale	Emenat, & Mekuwanent Association	
	Askal Teshager	Arenguwade Raey SWM	
	Abebe Zelalem	Dream Light SWM	
	Rahel Awulew	Rahel and Eleni Greenery S.C	
	Rodas Minyichel	Rodas and Friends SWM Associaiton	
	Worke Abebe	Getahun, Yohannes and Friends Compost Production Cooperative	
	Tiruye Kinde	Asefa, Birtusew and Friends Compost Producer Cooperative	
	Yenenat Assefa	Asefa, Birtusew and Friends Compost Producer Cooperative	
	Wude Damte	Getahun, Yohannes and Friends Compost Production Cooperative	
Dire Dawa	Sintayeh Hailu	Bisa Compost Production Association	
	Asheber Getachew	Bisa Compost Production Association	
	Mohammed Dawud	Bisa Compost Production Association	
	Awol Temam	Bisa Compost Production Association	
	Tesfaye Endale	Bisa Compost Production Association	

ANNEX M: LIST OF DOCUMENTS REVIEWED

1. NAMA COMPOST Project document
2. Cities policy documents, strategies and development plan
3. Sustainable Development Goals (SDGs) Progress report
4. 10 Year Development Perspective plan and Home Grown
5. Logical/result framework for NAMA COMPOST Project
6. Baseline Assessment Report
7. Progress annual reports and Project Progress Report
8. Minutes of the Steering Committee
9. Minutes of Project Board Meeting
10. GEF Core Indicators NAMA COMPOST May, 2020
11. GEF Project Implementation Review, 2018, 2019, 2020, 2021
12. Annual work plan for NAMA COMPOST project,2017, 2018, 2019, 2020
13. NAMA COMPOST Project Multi-year Work plan
14. Mid-term review Report
15. UNDP-GEF project document
16. POST Report. August, 2019
17. Project Assessment report
18. Independent Project Mid-Term Review Management Response, September 2019
19. Ethiopia National policy documents & strategies on Gender equality
20. National government development policies and strategies
21. Project assessment report
22. NAMA COMPOST Project Annual Report for 2018, 2019,2020
23. Budget revision for AWP for NAMA COMPOST project, 2019.
24. Back to Office Field Mission Report for Cities of Bahir Dar, Bishoftu, Dire Dawa and Hawassa
25. Uganda Study Tour and Twinning Arrangement December 17 – 27, 2017
26. Austria Study Tour and Twinning Arrangement February 11th – 17, 2019
27. Draft Memorandum of Understanding (MoU) between Cities and Universities/ Research Institutes on Capacity Building and Research on Compost. July, 2021.
28. Detail Expenditures and Investments Report for NAMA COMPOST Project Co-financing during Project Implementation.
29. NAMA COMPOST Project Phasing Out Plan
30. NAMA COMPOST Project Progress Summary and MOV
31. Presentation on Project Steering Committee Meeting on achievements by MUDC, UNDP and Cities 16 January, 2020.
32. Summary of UGI activities progress against the targets, June, 2021.
33. Summary of ISWM progress and achievements (2017-2021), June 2021
34. Minutes of the Steering Committee Meetings (1^{st} -6^{th}) Meeting
35. ETH-RFP-2017-15-MRV-Mechanism-CompostCalculationV3
36. MRV reports for Cities - Mechanism for Calculating Emission Reductions
37. Project Identification Form (PIF)
38. UNDP Country Programme Document (CPD)
39. MTE Management response to MTE recommendations
40. ISWM and UGI Occupation Standards