



## Project Implementation Report

(1 July 2022 – 30 June 2023)

<b>Project Title:</b>	Promotion of BAT and BEP to reduce uPOPs releases from waste open burning in the participating African countries of SADC sub-region
<b>GEF ID:</b>	5322
<b>UNIDO ID:</b>	150060
<b>GEF Replenishment Cycle:</b>	GEF-5
<b>Country(ies):</b>	Botswana, Eswatini, Lesotho, Madagascar, Mozambique, Tanzania, Zambia
<b>Region:</b>	AFR - Africa
<b>GEF Focal Area:</b>	Persistent Organic Pollutants (POPs)
<b>Integrated Approach Pilot (IAP) Programs<sup>1</sup>:</b>	N/A
<b>Stand-alone / Child Project:</b>	Stand-alone
<b>Implementing Department/Division:</b>	ENV / IPM
<b>Co-Implementing Agency:</b>	N/A
<b>Executing Agency(ies):</b>	Min. of Environment, Wildlife and Tourism (Botswana) Eswatini Environment Authority (Eswatini) Min. of Tourism, Environment and Culture (Lesotho) Min. of Environment and Sustainable Development (Madagascar) Min. of Land, and Environment (Mozambique) Vice President's Office-Division of Environment (Tanzania) Zambia Environmental Management Agency (Zambia)
<b>Project Type:</b>	Full-Sized Project (FSP)
<b>Project Duration:</b>	60 months
<b>Extension(s):</b>	2
<b>GEF Project Financing:</b>	USD 6,615,000
<b>Agency Fee:</b>	USD 628,425
<b>Co-financing Amount:</b>	USD 28,361,000
<b>Date of CEO Endorsement/Approval:</b>	2/10/2016

<sup>1</sup> Only for **GEF-6 projects**, if applicable

<b>UNIDO Approval Date:</b>	4/13/2016
<b>Actual Implementation Start:</b>	5/13/2016
<b>Cumulative disbursement as of 30 June 2023:</b>	4,079,184.51
<b>Mid-term Review (MTR) Date:</b>	9/17/2021
<b>Original Project Completion Date:</b>	14/13/2021
<b>Project Completion Date as reported in FY22:</b>	5/31/2024
<b>Current SAP Completion Date:</b>	5/31/ 2025
<b>Expected Project Completion Date:</b>	5/31/ 2025
<b>Expected Terminal Evaluation (TE) Date:</b>	02/28/2025
<b>Expected Financial Closure Date:</b>	02/28/2026
<b>UNIDO Project Manager<sup>2</sup>:</b>	Mr. Vladimir Anastasov

## I. Brief description of project and status overview

<b>Project Objective</b>		
The primary objective of the project is the continuous minimization of uPOPs releases in the open burning sector of participating countries of SADC region in a sustainable manner through the introduction of BAT and BEP measures at selected priority demonstration sites.		
<b>Project Core Indicators</b>		<b>Expected at Endorsement/Approval stage</b>
9.1	Solid and liquid POPs removed or disposed (uPOPs from uncontrolled burning )	341.9 gTEQ/a
11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	400 male/female

<b>Baseline</b>
The implementation of integrated waste management practices in Africa and in particular in participating countries is generally at an infancy stage. Waste treatment facilities are very few as well as reuse/recycling facilities. Hazardous waste streams are commonly diverted to some uses other than final disposal or mixed and disposed of with other waste streams. The participating countries lack the technical and institutional capacity, regulations and financial support to monitor the releases of uPOPs and other harmful contaminants arising from open burning practices as well as awareness of the effects of uPOPs releases on environment. Decision makers in the region are aware of the need to set up waste management programmes and to upgrade open dumpsites to sanitary landfills. At the national and municipal levels, however, very few countries have taken step to set up a regulatory framework and construct, operate and maintain sound waste management facilities. Existing legislation in some countries include certain provisions to control waste disposal or prevent agricultural residues burning. However, in most of the participating countries, the EPA do not address all aspects of uPOPs releases from open burning and usually do not contain

<sup>2</sup> Person responsible for report content

considerations about impacts of climate change on this sector of waste management. With the GEF support, the participating countries will enhance their institutional capacity and technical capability of public and private stakeholders by reviewing and updating current regulations and policies and filling in the gaps. The GEF funding will be based on viable BAT/BEP with the main goal of establishing a solid basis for progressive phasing out of open burning practices. Furthermore, institutionalizing the informal sector will enable provision of dedicated training on recycling activities and health safety protection, introducing more efficient and innovative business practices and awareness raising on risks connected with the exposure and accident prevention.

**Targeted results:** The project will complement initiatives in participating countries and substantially contributes to the achievements of global environmental objectives in the region. The implementation of all components of the project will ensure a holistic and cost-effective approach in developing waste management sector in the region by introducing missing aspects of uPOPs topics and filling in the gaps. In addition, each government should provide guidance for the private and public sectors for inclusive and sustainable development, put in place the relevant regulatory framework and ensure sustainability of its implementation. The project will target institutional gaps and provides examples of BAT/BEP on selected demonstration sites. Targeted training and awareness raising campaigns as well as open burning related programmes will be undertaken in a coordinated regional cooperation and information platform. The project is structured in four (4) technical components plus monitoring and evaluation component.

Please refer to the explanatory note at the end of the document and select corresponding ratings for the current reporting period, i.e. FY23. Please also provide a short justification for the selected ratings for FY23.

In view of the GEF Secretariat's intent to start following the ability of projects to adopt the concept of adaptive management<sup>3</sup>, Agencies are expected to closely monitor changes that occur from year to year and demonstrate that they are not simply implementing plans but modifying them in response to developments and circumstances or understanding. In order to facilitate with this assessment, please introduce the ratings as reported in the previous reporting cycle, i.e. FY22, in the last column.

Overall Ratings <sup>4</sup>	FY23	FY22
Global Environmental Objectives <b>(GEOs)</b> / Development Objectives <b>(DOs)</b> Rating	Moderately Satisfactory (MS)	Moderately Satisfactory (MS)
Considering that the project is still executing technical assistance activities, it is too early to assess achievements of GEOs and DOs. However, there are already some tangible signs of impact of the project. After raising awareness of local communities on the importance of waste sorting of waste at source and the negative impacts of open burning, one municipality reported , an increase in the number of people contributing to waste collection fees. Following similar activities, another municipality reported noticing a drastic decrease of open burning. At a third municipality where indiscriminate disposal of waste was rampant before the project, some improvement was seen in the collection rate of recyclables. In terms of business opportunities and job creation, some municipalities have reported an increase in demand by companies to invest in material recovery, reuse and recycling. Municipalities also confirmed their commitment to job creations in the context of pilot projects.		
Implementation Progress <b>(IP)</b> Rating	Moderately Satisfactory (MS)	Moderately Satisfactory (MS)
The slow start of the project in the first two years has significantly affected the implementation of project activities. Restrictions imposed on the sub-region from 2020 to 2022 as a result of COVID-19 has also		

<sup>3</sup> Adaptive management in the context of an intentional approach to decision-making and adjustments in response to new available information, evidence gathered from monitoring, evaluation or research, and experience acquired from implementation, to ensure that the goals of the activity are being reached efficiently

<sup>4</sup> Please refer to the explanatory note at the end of the document and assure that the indicated ratings correspond to the narrative of the report

affected the implementation process. Additionally, some countries have had problems securing lands or in some cases infrastructures to host pilot projects. Obtaining required permits and land allocation in a timely manner has been difficult for some executing partners.

Overall <b>Risk</b> Rating	Low Risk (L)	Moderate Risk (M)
The overall Risk Rating for the previous year (2022) was Moderate Risk (M) as at the time only ten (10) months were left to complete the project. Since a two-year extension has been granted from May 2023 until May 2025, the likelihood of completing the project successfully has considerably increase, thereby reducing the risks to fail GEOs and DOs targets. So far, the project has not contributed to other risks such as social or environmental risks related to execution of activities.		

## II. Targeted results and progress to-date

Please describe the progress made in achieving the outputs against key performance indicator's targets in the project's **M&E Plan/Log-Frame at the time of CEO Endorsement/Approval**. Please expand the table as needed.

*Please fill in the below table or make a reference to any supporting documents that may be submitted as annexes to this report.*

Project Strategy	KPIs/Indicators	Baseline	Target level	Progress in FY23
<b>Component 1 – uPOPs baseline information on open burning practices and inventory of major dumpsites/landfills in participating countries</b>				
Outcome 1: Updated regional information on current open burning practices and establishment of uPOPs baseline inventories				
<b>Output 1.1:</b> National information on current locations of open burning practices validated and updated uPOPs inventories reviewed	<ul style="list-style-type: none"> <li>Criteria for selection of priority dumpsites / landfill sites</li> <li>Number of regional and national training workshops on inventories of uPOPs</li> </ul> Number of experts (male/female) trained	National data on open burning sites	<ul style="list-style-type: none"> <li>One (1) regional training workshop for at least 14 experts on the preparation of uPOPs inventories</li> <li>One (1) national stakeholders workshop on uPOPs inventories conducted for at least 20 participants in each participating country</li> </ul> Appropriate gender representation observed	<ul style="list-style-type: none"> <li>17 experts from the participating countries were trained on the preparation and updating of uPOPs inventories at a regional workshop held in Maputo, Mozambique in March 2017 (7 females/10 males)</li> <li>All seven (7) participating countries carried out their national inventories and conducted the workshops for over 70 people participated in these workshops (52 males/18 female)</li> <li>Inventories' reports for Botswana, Eswatini, Lesotho, Madagascar, Mozambique, Tanzania, and Zambia are available here: <a href="http://stopopenburning.unitar.org/">http://stopopenburning.unitar.org/</a></li> </ul> In FY 23, the Project continued to provide assistance for countries to regularly update their inventories. Activity is completed.
<b>Output 1.2:</b> Regional information on open burning practices and data on uPOPs releases exchanged and respective regional cooperation and networking consolidate	<ul style="list-style-type: none"> <li>Number of national and regional databases in operation</li> <li>Number of national workshops conducted</li> </ul> Number of trainees (men/women)	Data reporting not harmonized and compiled	<ul style="list-style-type: none"> <li>Seven (7) national databases operational for accessibility of all stakeholders created</li> <li>One (1) regional database linking the national database established</li> </ul>	<ul style="list-style-type: none"> <li>The 2<sup>nd</sup> Project Steering Committee (PSC) meeting held in Antananarivo, Madagascar in March 2018 recommended that the United Nations Institute for Training and Research (UNITAR), Geneva takes up the regional and national training component of the project including development of guidelines, guidance, awareness raising materials as well as development of the database/website.</li> <li>UNITAR and UNIDO signed contract in July 2018.</li> </ul>

			<p>At least one workshop conducted at national level to train at least 2 national experts in each participating country</p>	<ul style="list-style-type: none"> <li>UNITAR created the database information system in the form of a website: <a href="http://stopopenburning.unitar.org/">http://stopopenburning.unitar.org/</a>. It includes both national and regional sub-sites.</li> <li>Project countries continued to create their national databases and upload of national information in project database started in June 2019.</li> <li>UNITAR conducted a regional training workshop as a webinar in Livingstone, Zambia, 7-8 March 2019. 18 experts participated (5 females/13 males)</li> <li>A manual for national data upload was also developed and to be supplemented with a video tutorial.</li> <li>UNITAR conducted national face-to-face training in Botswana, Eswatini, Lesotho, Madagascar, Mozambique, and Zambia during 2019. See Output 3.1 for the number of people targeted/trained in each country.</li> <li>UNITAR conducted a second regional face-to-face training workshop (REG2) on regional database in Dar es Salaam, Tanzania, 21-24 November 2022. 32 experts participated (13 females/19 males)</li> <li>UNITAR conducted national virtual training workshops and introduced different set of modules that were developed in April 2022 in 6 participating countries:</li> </ul> <p><b>Botswana:</b> 28 February 2023  <b>Eswatini:</b> 16-17 March 2023  <b>Lesotho:</b> 16 February 2023  <b>Madagascar:</b> 31 January 2023  <b>Mozambique:</b> 13 April 2023  <b>Zambia:</b> 9 May 2023</p> <p>The topics of the modules covered at the national virtual training workshops include:</p> <ul style="list-style-type: none"> <li>BAT/BEP concept, procedures, and guidelines on reduction and/or elimination of open burning of wastes and agricultural residues</li> <li>Preventing irrational dumping of wastes</li> <li>Preventing open burning practices</li> <li>Promoting occupational health safety and hygienic measures at the landfill sites</li> <li>Best practices in waste management in relation to open burning of wastes including case studies</li> <li>The role of private and informal sectors in waste recycling</li> <li>Waste-to-energy concepts (e.g. biomass waste recycling and disposal options)</li> <li>Developing waste management regulations and compliance mechanisms</li> <li>COVID-19 and the sound management of medical/ healthcare wastes</li> </ul> <p>See Output 3.1 for the number of people targeted/trained in each country.</p> <ul style="list-style-type: none"> <li>UNITAR conducted a national face-to-face training in Tanzania ) as per the topics</li> </ul>
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				mentioned above in 25-26 November 2022 in Dar es Salaam. 31 experts participated (11 females/20 male)
<b>Component 2 – Regulatory / Legal framework review, policy development and institutional strengthening</b>				
Outcome 1: Strengthened legislation and human resources capacity in implementing BAT/BEP at selected priority sites of open burning				
<b>Output 2.1:</b> Regulatory measures aimed at discouraging open burning practices of different waste streams and agricultural residues formulated or amended	<ul style="list-style-type: none"> <li>Number of existing laws and regulations addressing open burning of waste</li> </ul> <p>Number of stakeholder consultation involving private sector</p>	Analysis of SC related legislation in the NIP updates	<ul style="list-style-type: none"> <li>Initiation/review of laws and regulations in 7 participating countries</li> <li>7 national multi-stakeholder consultations including private sectors on legislation and business opportunities with at least 10 participants in participating countries</li> </ul> <p>Appropriate gender representation observed</p>	<ul style="list-style-type: none"> <li>All seven (7) project countries completed the review of laws and regulations in relation to open burning practices</li> <li>All seven (7) project countries completed their national multi-stakeholder consultations with over 91 persons participated (64 males/27 females)</li> <li>In April 2022, UNITAR developed an e-learning training module on "Developing waste management regulations and compliance mechanisms". The module is composed of a guidance document and PPT. This module was introduced to experts in a regional workshop held in Dar es Salaam, Tanzania from 21 to 24 November 2022, as well as in some participating countries as part of the second national workshops (NAT2).</li> </ul>
<b>Output 2.2:</b> Country action plans for managing and phasing out the open burning of waste and agricultural residues reviewed and strengthened	<ul style="list-style-type: none"> <li>Number of targeted trainings on BAT/BEP and open burning issues</li> <li>Number of national action plans on reduction of uPOPs from open burning</li> <li>Number of male / female trained</li> </ul> <p>Number of participating countries supported on prevention of irrational dumping</p>	Action plans addressing open burning practices not available at country level	<ul style="list-style-type: none"> <li>At least one (1) training on BAT/BEP concepts and management of open burning of waste at national level</li> <li>At least 10 relevant stakeholders (male/female) in each participating country trained on BAT/BEP concepts</li> <li>National action plans for reducing uPOPs releases in open burning in each participating country</li> </ul> <p>All participating countries supported for prevention of irrational dumping</p>	<ul style="list-style-type: none"> <li>During the second half of 2021 and first half of 2022, countries conducted national trainings on BAT/BEP for sound management of waste and reduction of open burning. People trained: Botswana (31 persons: 10 females/21 males), Eswatini (29 persons: 15 females/14 males), Lesotho (11 persons: 7 females/4 males), Madagascar (15 persons: 7 females/8 males), Mozambique (26 persons: 11 females/15 males), and Tanzania (26 persons: 10 females/16 males). In Q4 2019, Zambia conducted national trainings on BAT/BEP concepts with 11 participants in total (3 females/ 8 males).</li> <li>National action plans are being developed and close monitoring is maintained by UNIDO. Draft waste management plans have been finalized in Eswatini, Lesotho, Madagascar, Tanzania, and Zambia.</li> <li>In April 2022, UNITAR developed three (3) e-learning modules on: (i) "Banning of irrational dumping of waste", (ii) "Preventing open burning practices", (iii) "Promoting occupational health safety and hygienic measures at the landfills sites". These three modules are composed of a guidance document, and a PPT. These modules were introduced to experts at REG2 held in Dar es Salaam, Tanzania in 21-24 November 2022, as well as in some participating countries as part of the second national workshops (NAT2).</li> </ul>
<b>Output 2.3:</b> Regional BAT/BEP guidance for uPOPs reduction formulated for respective Ministry of Environment's adoption at country level for substantial reduction and/or collective	<ul style="list-style-type: none"> <li>Number of guidance documents on BAT/BEP prepared and adopted at regional and national level</li> </ul>	Priority sectors and practices of open burning identified through the NIPs	<ul style="list-style-type: none"> <li>Guidance document for reducing uPOPs releases in open burning in priority sectors adopted by MoE in</li> </ul>	<ul style="list-style-type: none"> <li>A regional adaptation of the document "Guidance/guidelines by source category: Source categories in Part III of Annex C - Part III Source category (a): Open burning of waste, including burning of landfill sites" under the Stockholm Convention was drafted by UNITAR and was reviewed by</li> </ul>

elimination of waste and agricultural residues in open burning practices	<ul style="list-style-type: none"> <li>Number of training workshops on BAT/BEP guidelines, manuals, procedures, etc.</li> </ul> <p>Number of trainees (men/women)</p>		<p>participating countries</p> <ul style="list-style-type: none"> <li>One (1) regional workshop on BAT/BEP guidelines with at least 14 participants (2 each participating country)</li> <li>Appropriate gender representation observed</li> </ul>	<p>the project countries in Livingstone, Zambia in March 2019 and finalised based on their feedback</p> <ul style="list-style-type: none"> <li>UNITAR conducted a regional workshop on BAT/BEP guidelines for the participating countries in Livingstone, Zambia in March 2019. 18 experts from the participating countries attended the regional workshop (5 females/13 males).</li> <li>UNITAR conducted a second round of regional face-to-face regional training workshop on the BAT/BEP guidelines in Dar es Salaam, Tanzania, 21-24 November 2022. 32 experts participated (13 females/19 males)</li> <li>In April 2022, UNITAR developed an e-learning training module on "The preparation of manuals, procedures and guidelines using BAT/BEP measures on how to eliminate and/or reduce open burning of waste and agricultural residues". The training module is composed of a guidance document, PPT and a video. This module was introduced to experts at the regional workshop held in Dar es Salaam, Tanzania in 21-24 November 2022, as well as in some participating countries as part of the second national workshops (NAT2).</li> </ul>
<b>Output 2.4:</b> Adequate technical infrastructure for implementing BAT/BEP and waste management best practices built	<ul style="list-style-type: none"> <li>Number of laboratory facilities upgraded</li> <li>Provision of sampling toolkits / devices</li> </ul> <p>Number of experts (men/women) trained on BAT/BEP</p>	National capacities on BAT/BEP lacking in participating countries	<ul style="list-style-type: none"> <li>One (1) existing laboratory in each participating country provided with necessary sampling toolkits/devices for implementation of BAT/BEP</li> <li>Sampling and analysis of uPOPs releases on open burning undertaken in 7 participating countries</li> </ul> <p>At least 2 experts each participating country trained on sampling / analysis of uPOPs and transfer of BAT/BEP</p>	<ul style="list-style-type: none"> <li>In Q2 2023 UNIDO hired an expert in sampling and analysis of uPOPs to assess existing laboratories in the participating countries.</li> <li>UNIDO expert visited 5 laboratories in 4 participating countries in March and May 2023.</li> </ul> <p><b>Tanzania:</b> Government Chemist Laboratory Authority (GCLA) in Dar es Salaam, and Tanzania Plant Health and Pesticides Authority (TPHPA) in Arusha on 27-28 March 2023 and 29-30 March 2023 respectively.</p> <p><b>Botswana:</b> The Department of Waste Management and Pollution Control (DWMPC)'s laboratory on 2 May 2023</p> <p><b>Lesotho:</b> The Chemistry Laboratory, National University of Lesotho (NUL), Maseru, on 3 May 2023</p> <p><b>Eswatini:</b> The Chemistry Laboratory, University of Eswatini, Manzini, on 5 May 2023.</p> <ul style="list-style-type: none"> <li>Development of technical specifications for upgrading of capacities of participating laboratories in sampling and analysis uPOPs in the environment is ongoing. Technological upgrading and capacity building should be completed in the first semester of 2024.</li> </ul>

### Component 3 – Pilot demonstration of BAT/BEP in selected priority sites

Outcome 1: Implementation of BAT/BEP to reduce uPOPs releases in the open burning sector at national and regional levels

<b>Output 3.1:</b> Waste management best practices carried out at two (2) selected priority demonstration municipalities in each participating country	<ul style="list-style-type: none"> <li>Number of municipalities for pilot projects using PPP models</li> <li>Number of men/women trainees on BEP at</li> </ul>	Inventories of landfills and dumpsites available	<ul style="list-style-type: none"> <li>BEP introduced in two (2) selected landfills/dumpsites in each participating country</li> </ul>	<ul style="list-style-type: none"> <li>A toolkit for the design of waste management plans was developed in 2020 by TU Wien, mobilized by UNIDO as a contractor for provision of technical services. The toolkit was developed with a template designed for development of waste management plan and a Software</li> </ul>
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	<p>national and regional levels</p> <p>Number of waste management plans implemented</p>		<ul style="list-style-type: none"> <li>• One (1) regional workshop on BAT/BEP measures with at least 20 participants (men/women)</li> <li>• Two (2) national workshops each in participating countries on BEP with 25 participants (men/women)</li> </ul> <p>All participating countries implementing waste management plan using PPP</p>	<p>(WAPLA) on Waste Management Planning for project countries.</p> <ul style="list-style-type: none"> <li>• An on-line training course on the use of this tool was conducted by TU Wien for experts from the project countries and the SADC Secretariat on 7-8 December and 15-17 December 2020. 27 experts participated (20 males/7 females)</li> <li>• All project countries successfully selected priority demonstration municipalities to implement pilot projects on best environmental practices (BEP) implementation of waste management plans:  <b>Botswana:</b> Kgatleng and Palapye districts  <b>Eswatini:</b> Siteke and Matsapha  <b>Lesotho:</b> Maseru and Maputsoe  <b>Madagascar:</b> Talatamaty/Antehiroka and Antsirabe  <b>Mozambique:</b> Boane and Manhica  <b>Tanzania:</b> Kigamboni and Ubungo  <b>Zambia:</b> Chongwe and Livingstone</li> <li>• UNITAR organized two regional workshops on BAT/BEP for representatives of all participating countries: in Livingstone, Zambia in March 2019 where 18 experts attended (5 females/13 males) and in Dar es Salaam Tanzania in 21-24 November 2022</li> <li>• UNITAR conducted (i) national training workshops on BAT/BEP (ii) national awareness raising seminars on waste management plans, and (iii) awareness raising activities on the health and environmental risk and exposure hazards of open burning practices in all participating countries, as follows:  <b>Botswana</b> in February 2020 (27 persons attended- 11 females and 16 males)  <b>Eswatini</b> in April 2019 ((57 persons attended- 20 females and 27 males). More workshops were conducted by Eswatini (89 persons- 40 females/49 males)  <b>Lesotho</b> in September 2019 (23 persons attended- 13 females and 10 males)  <b>Madagascar</b> in July 2019 (40 persons attended- 15 females and 25 males)  <b>Mozambique</b> in December 2019 (133 persons attended- 55 females and 78 males)  <b>Zambia</b> in December 2019 (67 persons attended- 19 females and 48 males)  <b>Tanzania in November 2022</b> 31 experts participated (11 females/20 males)</li> <li>• In the first trimester of 2023, UNITAR conducted a second round of national (virtual) training workshops for participating countries, presenting e-learning training modules related to best practices in waste management:  <b>Botswana:</b> 28 February 2023. 12 participated (3 females/ 9 males)  <b>Eswatini:</b> 16-17 March 2023. 25 participated (4 females/ 11 males)</li> </ul>
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				<p><b>Lesotho:</b> 16 February 2023. 40 participated (26 females/ 14 males)</p> <p><b>Madagascar:</b> 31 January 2023. 31 participated (13 females/ 18 males)</p> <p><b>Mozambique:</b> 13 April 2023. 28 participated (15 females/ 13 males)</p> <p><b>Zambia:</b> 9 May 2023. 20 participated (8 females/ 12 males)</p> <ul style="list-style-type: none"> <li>As a result of extensive training and capacity-building received from the project, five (5) countries (Eswatini, Lesotho, Madagascar, Tanzania, and Zambia) developed draft waste management plans. Countries are yet to implement the plans using PPP models, and pilot infrastructure i.e. Recyclable Collection Centres (RCCs) and MRFs in case of Tanzania are under planning but not yet operational.</li> </ul>
<p><b>Output 3.2:</b> Waste management plans introducing BAT/BEP measures (segregation system) developed and implemented in two (2) selected major dumpsites and landfills in the participating countries using PPP models</p>	<ul style="list-style-type: none"> <li>Number of BAT/BEP plans using PPP model</li> <li>Number of waste recycling enterprises with segregation systems</li> <li>g-TEQ/a of uPOPs releases avoided</li> </ul> <p>Number of men / women trainees</p>	Inventories of landfills and dumpsites	<ul style="list-style-type: none"> <li>Detailed BAT/BEP plans developed in two (2) selected landfills/dumpsites in each participating country</li> <li>Two (2) pilots of segregation systems for collecting waste materials of added value (conveyor belts, sorting, washing, compacting, etc)</li> <li>One (1) national awareness seminar on BAT/BEP plans with at least 10 participants in each participating country</li> </ul> <p>17% of annual releases reduction of uPOPs Appropriate gender representation observed</p>	<ul style="list-style-type: none"> <li>UNITAR conducted national awareness seminars on waste management plans in Botswana, Eswatini, Lesotho, Madagascar, Mozambique, Tanzania, and Zambia Total number of participants: 286 (99 females/ 98 males)</li> <li>Execution contracts for introduction of best environmental practices (BEP) in selected municipalities signed between UNIDO and Eswatini (July 2019), Lesotho (August 2019), Zambia (November 2019), Madagascar (March 2021), Tanzania (April 2021), and Mozambique (January 2022).</li> <li>Botswana completed conducting baseline studies in the selected municipalities/ districts in January 2023.</li> <li>Draft Waste Management Plans submitted to UNIDO by Eswatini (April 2021), Zambia (June 2021), Lesotho (December 2021), Tanzania (October 2022), and Madagascar (November 2022).</li> <li>Participants of Kickoff workshops for Eswatini, Madagascar and Mozambique are as follows: Eswatini: 21-23 February 2022: 26 participants (6 females/ 20 males) Madagascar: 16 October 2022: 15 participants (8 females/ 7 males) Mozambique: 13-14 April 2022: 49 participants (26 females/ 23 males); 27-30 September &amp; 01 October: 59 participants (35 females/ 24 males).</li> </ul>
<p><b>Output 3.3:</b> Biomass waste recycling and disposal options promoted in two (2) demonstration sites in selected participating countries through alternative waste management plans for better value addition</p>	<ul style="list-style-type: none"> <li>Agricultural residues inventoried and selected for value addition</li> <li>Number of pilots for waste-to-energy using PPP model</li> </ul>	Biomass waste recycling exist in some participating countries	<ul style="list-style-type: none"> <li>At least two (2) biomass sources identified</li> <li>Two (2) pilot demonstration projects on waste-to-energy (biogas, bracketing, etc.)</li> <li>One (1) regional awareness seminar on BAT/BEP plans</li> </ul>	<p>BAT/BEP pilot demonstration projects selected for their potential to significantly reduce uPOPs emissions in critical value chains were initiated in three (3) project countries.</p> <p><b>In Lesotho</b> a pilot project for recycling of textile discards is currently under planning phase. Textile discards were selected as a critical sector of intervention for the project as</p>

	<ul style="list-style-type: none"> <li>• Number of men / women trainees</li> <li>• Number of jobs created</li> <li>• g-TEQ/a of uPOPs releases avoided</li> </ul> <p>Number of additional investments on recycling for replication and sustainability</p>		<ul style="list-style-type: none"> <li>with at least 14 participants (men/women)</li> <li>• At least two (2) workers employed to operate pilot demonstration projects</li> <li>• 17% of annual releases reduction of uPOPs</li> <li>• At least 70 men/women trained at national level in all participating countries to promote biomass waste recycling</li> </ul> <p>Recycling enterprises sustained and replicated in participating countries</p>	<p>a result of detailed inventory of textile discards and subsequent techno-economic study conducted in 2021 by the Lesotho National Development Corporation (LNDC) in Maputsoe.</p> <p>In order to build knowledge in this highly technical area of expertise, the project organized a study tour in February 2020 to Prato and Milan, Italy seven (7) government officials and experts (6 female/1 male) from Lesotho.</p> <p>In early 2023, UNIDO and LNDC jointly published a call for identification of beneficiaries to identify and to select an existing textile company in Maseru and Maputsoe area to host the pilot project in textile discards. An information workshop for the potential investors was organized in April 2023 by LNDC and triggered great interest from the private sector.</p> <p>Selection of pilot project is ongoing and subsequent technological upgrading for recycling of textile discards should be conducted in 2023.</p> <p><b>In Madagascar</b>, a pilot project will be established for composting of organic waste at Antsirabe municipality. A baseline assessment of organic waste was conducted in 2020, and a detailed project proposal for the composting plant– further confirming the relevance of this area of intervention was developed in 2023. A business plan and a detailed list of equipment for technology transfer is also available. Construction plans for the facility is under finalization, and list of equipment is available. Construction is planned to take place in 2024.</p> <p><b>In Zambia</b> a Material Recovery Facility (MRF) will be established in Livingstone for recycling of valuable waste fractions including metal, plastic and paper. Enhancing recovery of material for reduction of solid waste and open burning is a strategic approach in Livingstone, where tourism and a large concentration of hotels enables successful piloting of waste sorting at source.</p> <p>A local operator for the MRF was selected by the Livingstone City Council in 2021. Equipment for waste recycling has been successfully delivered to Livingstone. Construction is ongoing in partnership with the World Bank, successfully mobilized in the project by the Zambia Environment Management Agency.</p> <p><b>On awareness raising</b>, UNITAR developed in 2022 an e-learning training module on “Waste-to-energy concepts (e.g. biomass waste recycling and disposal options)”. This module is composed of a guidance document, and a PPT. This module was introduced to experts at REG2 held in Dar es Salaam, Tanzania in 21-24 November 2022, as well as in some participating countries as part of the second national workshops (NAT2).</p>
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				UNITAR conducted a second round of regional face-to-face training workshop (REG2) on biomass waste recycling and disposal options for the project countries in Dar es Salaam, Tanzania, 21-24 November 2022. 32 experts participated (13 females/19 males).
<b>Output 3.4:</b> Harmonized methodology developed to set-up uPOPs release reduction targets for open burning sector at regional level	<ul style="list-style-type: none"> <li>Number of trainees (men/women)</li> <li>Harmonized release reduction targets on open burning of waste</li> </ul>	National reports on methodologies for uPOPs release reduction	<ul style="list-style-type: none"> <li>One (1) regional workshop to harmonize methodology with at least 14 participants (men/women)</li> <li>At least five (5) global workshops promoting replication of methodology for uPOPs releases reduction during project life</li> </ul> Regional methodology for uPOPs release reduction	UNITAR conducted a second round of regional face-to-face training workshop (REG2) to develop a harmonized methodology to set-up uPOPs release reduction targets for open burning sector for the project countries in Dar es Salaam, Tanzania, 21-24 November 2022. 32 experts participated (13 females/19 males).
<b>Output 3.5:</b> Socio-economic impacts of the project intervention on private and informal sectors including recycling business plans assessed	<ul style="list-style-type: none"> <li>Number of jobs created</li> <li>Baseline and result surveys</li> <li>Number of trainees (men/women)</li> <li>Decreased number of individuals working in poor or ultra-poor households</li> </ul>	Working poor and ultra-poor at low socio-economic level is the main workforce at landfills and dumpsites	<ul style="list-style-type: none"> <li>Two (2) PPPs in each participating country providing job opportunities to working poor and ultra-poor</li> <li>One (1) national awareness seminar on PPP models with at least 10 participants (men/women) in each participating country</li> <li>Baseline and results surveys evaluated in all participating countries</li> <li>At least one (1) study tour for 2 individuals from each participating country</li> </ul> 50% improved livelihood of people	<ul style="list-style-type: none"> <li>PPP models are part of waste management plans developed by participating countries and will be piloted in newly built infrastructures.</li> <li>A study tour to Kigali, Rwanda was organized by the Project from 24-28 June 2019 for 14 participants from project countries (4 females/10 males) to learn about best practices as well as role of governments, private and informal sectors in waste management and recycling of waste in Rwanda.</li> <li>UNITAR conducted awareness raising seminars on PPP models in Botswana, Eswatini, Lesotho, Madagascar, Mozambique, Tanzania, and Zambia Total number of participants: 286 (99 females/ 98 males)</li> <li>In April 2022, UNITAR developed an e-learning training module on "Supporting of the private and informal sectors to promote recycling through alternative waste management plans". This module is composed of a guidance document, a PPT and a video. This module was introduced to experts at REG2 held in Dar es Salaam, Tanzania in 21-24 November 2022, as well as in some participating countries as part of the second national workshops (NAT2).</li> <li>Madagascar is the only country that prepared and submitted to UNIDO (in October 2021) a report on socioeconomic baseline and result surveys for evaluation of the effects of the project.</li> </ul>
<b>Component 4 – Information dissemination and awareness raising</b>				
<b>Outcome 1:</b> Knowledge transfer on BAT/BEP for replicability and awareness raising on uPOPs related risks and exposure in open burning sector				
<b>Output 4.1:</b> Targeted training and awareness campaigns emphasizing health and environmental	Number of individuals participating in the awareness raising	Lack of awareness of health and environmental	<ul style="list-style-type: none"> <li>One (1) regional training workshop to train trainers with 14</li> </ul>	UNITAR conducted a regional training workshop on the health and environmental risks of open burning practices in Livingstone, Zambia from 7-8 March 2019

<p>risk and exposure hazards of open burning practices for all relevant target groups observing appropriate gender representations (decision makers, professional associations, women/youth group associations, community leaders, farmers, women's groups, private industries, waste pickers, NGOs, media and the public at large) carried out</p>	<p>programs in each participating country</p>	<p>hazards at open burning sites</p>	<p>participants (men/women)</p> <ul style="list-style-type: none"> <li>At least one (1) targeted training and awareness campaign at two (2) selected landfills/dumpsites in each participating country with 10 participants (gender representation observed)</li> </ul> <p>One seminar for at least 10 workers/waste pickers (men/women) in each participating country</p>	<p>for 18 participants from the project countries (5 females/13 males).</p> <ul style="list-style-type: none"> <li>In addition, UNITAR conducted two rounds of awareness raising seminars, in 2019/2020 and 2023 on the same topic in Botswana, Eswatini, Lesotho, Madagascar, Mozambique, Tanzania, and Zambia. , Total number of persons targeted were 495 persons with 189 females and 211 males. A number of awareness raising materials were developed by the project, for use and replication of awareness raising campaigns at national level</li> </ul>
<p><b>Output 4.2:</b> Educational programmes for introduction of lessons learned and alternatives to open burning practices established at all levels in each participating country</p>	<ul style="list-style-type: none"> <li>Educational programs on alternatives to open burning introduced</li> </ul> <p>Number of trainees (men/women) on alternative to open burning of waste</p>	<p>Waste management courses in educational curricula are not available</p>	<ul style="list-style-type: none"> <li>Waste management courses incorporated into curricula at high school level in all participating countries</li> </ul> <p>At least one (1) seminar in all participating countries on BEP</p>	<ul style="list-style-type: none"> <li>Media campaigns: UNITAR provided a general set of background material for the countries' own adaptation to national media campaigns. Awareness raising activities – including media campaigns conducted in six (6) participating countries, except Tanzania. During these awareness raising activities, all key aspects were presented to invited stakeholders (slide shows and discussions), and the media provided coverage of the 1-day workshop with interviews with representatives from the Ministry of Environment in each project country and other participants</li> <li><u>Educational programmes:</u> UNITAR held meetings with national universities in six (6) project countries (Botswana, Eswatini, Lesotho, Madagascar, Mozambique, and Zambia) for the creation of accreditation courses on waste management and reduction of open waste burning for actors in the waste management and recycling value chain of the country. The training material developed with UNITAR under the project to be shared with the national universities for open use (various slide shows on risk, BAT/BEP, waste management planning, the Stockholm convention and occupational safety, etc.).</li> <li>No media campaigns or meetings with a national university in Tanzania was held by UNITAR during the national trainings (NAT1 &amp; NAT2) conducted in Dar es Salaam in November 2023.</li> </ul>
<p><b>Output 4.3:</b> Regional cooperation on BAT/BEP and uPOPs and information sharing established through the BAT/BEP Forum</p>	<p>BAT/BEP information sharing system in SADC region established</p>	<p>BAT/BEP Forum regional action plan agreed for open burning as priority</p>	<ul style="list-style-type: none"> <li>A database and website created to support Regional BAT/BEP Forum</li> <li>One (1) regional workshop for sharing experience and information on BAT/BEP with 20 participants</li> <li>Networking with Global Forums and Ecotowns</li> </ul>	<ul style="list-style-type: none"> <li>A database information system was created by the Project and is available at in: <a href="http://stopopenburning.unitar.org/">http://stopopenburning.unitar.org/</a></li> <li>Reports from all seven (7) project countries on inventories of countries' landfill, dumpsites, and hotspots for open burning of waste as well as baseline studies conducted at selected municipalities are available on the website and foster regional cooperation UNITAR.</li> <li>In December 2017, all countries participated in a seminar organized for Ecotown managers in Kitakyushu, Japan. The purpose of the seminar is to acquire an</li> </ul>

			<ul style="list-style-type: none"> <li>Appropriate gender representation observed</li> </ul>	understanding of circular economy based on Japanese experience covering policy development, legal aspects and introduction of Ecotown concept and transfer of technologies related to e-waste treatment.
<b>Component 5 – Monitoring and evaluation of results</b>				
<b>Outcome 1:</b> Design and implementation of Monitoring and Evaluation (M&E) framework in accordance with UNIDO and GEF requirements				
<b>Output 5.1:</b> Project intervention monitored, and project progress evaluated	Project M & E conducted	A project data management system (PDMS) not available	<ul style="list-style-type: none"> <li>Hold stakeholder consultation workshop</li> <li>Introduce monitoring and impact indicators</li> <li>Hold annual Regional Project Steering Committee meetings</li> <li>Prepare annual project financial audits</li> <li>Prepare annual Project Implementation Reports</li> <li>Carry out mid-term review (MTR)</li> <li>Carry out terminal evaluation</li> <li>Prepare Terminal report</li> <li>Establish a project data management system (PDMS)</li> </ul>	<ul style="list-style-type: none"> <li>Seven (7) Regional Project Steering Committee (PSC) meetings were held since the beginning of the Project :               <ul style="list-style-type: none"> <li>(i) 1<sup>st</sup> PSC meeting - Maputo, Mozambique, 4-5 April 2017</li> <li>(ii) 2<sup>nd</sup> PSC meeting - Antananarivo, Madagascar, 20-21 March 2018</li> <li>(iii) 3<sup>rd</sup> PSC meeting - Livingstone, Zambia, 5-6 March, 2019</li> <li>(iv) 4<sup>th</sup> PSC meeting - Gaborone, Botswana, 29-30 August 2019</li> <li>(v) 5<sup>th</sup> PSC meeting - Virtual Zoom meeting held on 10<sup>th</sup> December 2020</li> <li>(vi) 6<sup>th</sup> PSC meeting – Virtual Zoom meeting held on 17<sup>th</sup> December 2021</li> <li>(vii) 7<sup>th</sup> PSC meeting – Dar es Salaam, Tanzania, 24 November 2022</li> </ul> </li> <li>In FY23, the 7<sup>th</sup> regional PSC meeting was held in Dar es Salaam with representatives from all participating countries.</li> <li>UNIDO held regular meetings with major counterparts throughout the FY23 to monitor and support the execution of activities.</li> <li>MTE report submitted to UNIDO by the evaluators on April 15<sup>th</sup>, 2022.</li> </ul>

### III. Project Risk Management

1. Please indicate the overall project-level risks and the related risk management measures: (i) as identified in the CEO Endorsement document, and (ii) progress to-date. Please expand the table as needed.

	(i) Risks at CEO stage	(i) Risk level FY 22	(i) Risk level FY 23	(i) Mitigation measures	(ii) Progress to-date	New defined risk <sup>5</sup>
1	The surveys and the updated uPOPs inventories will not be conclusive as national staff appointed to the surveys and inventory update might not be sufficiently skilled in uPOPs evaluation.	Low risk (L)	Low risk (L)	Information collection will address some of the representative regions/provinces and the data will be extrapolated for the whole country. National staff will be trained in proper inventory methodologies by international experts who will be recruited for conducting field surveys and review of inventories	<ul style="list-style-type: none"> <li>Relevant stakeholders including government authorities trained at regional and national levels on updating uPOPs inventories. Detailed inventories conducted in all project countries and data uploaded in database established for the project for information sharing.</li> </ul>	<input type="checkbox"/>

<sup>5</sup> New risk added in reporting period. Check only if applicable.

2	Laws and regulations are partially developed in some countries. Relevant stakeholders and technicians not sufficiently trained in BAT/BEP and uPOPs monitoring and not all participating countries have the required resources to maintain uPOPs laboratory up to the standards.	Low risk (L)	Low risk (L)	<p>Special attention and support will be given to national authorities to ensure enforceability and a full coverage of the partially developed regulatory frameworks. This will be done by institutional capacity building and conducting targeted trainings to law enforcement authorities. National technical and laboratory staff will be trained on technical aspects of BAT/BEP in open burning sector and the specific methodologies for uPOPs monitoring. The network of laboratories in the SADC region will be enabled to deal with specific requirements of uPOPs analyses. Funding for equipment purchases and supporting institutions will be mobilised.</p> <p>Even though it is not expected that all laws and regulations be amended in all participating countries, targeted awareness campaigns and seminars on best practices to manage releases of uPOPs from open burning of waste, will be undertaken focusing on law enforcement personnel and other relevant multi-stakeholders.</p>	<ul style="list-style-type: none"> <li>Laws and regulations in relation to open burning practices reviewed by all project countries</li> <li>National multi-stakeholder consultations to fill gaps in reviewed laws and regulations undertaken in all project countries. Training of law enforcement personnel is expected to take place in Q4 of year 2023.</li> <li>Technical training to laboratory staff is expected to take place in 2024.</li> </ul>	<input type="checkbox"/>
3	BAT/BEP implementation programs in small dumpsites may not be feasible and cost efficient; BAT/BEP measures in large landfills will not achieve the assumed positive results, thus will not be cost-effective within the project lifetime.	Medium risk (M)	Medium risk (M)	<p>Upon reviewing the baseline, demonstration sites will be selected, and alternative simplified technology adoption programs will be identified. To address costs and time constraints, the project will focus on the existing hot-spot landfills to demonstrate cost-effective BAT/BEP implementation and technology transfers. The BAT/BEP will be developed and implemented using financial models that mobilize private sector participation to ensure cost effectiveness and continuation of new practices after the project life-time.</p>	<ul style="list-style-type: none"> <li>Baseline assessments of selected potential municipalities to implement BEP measures have been completed in 6 project countries</li> <li>Contracts for implementation of BEP measures in 2 municipalities in each project countries issued for Eswatini (July 2019), Lesotho (August 2019), Zambia (November 2019) Madagascar (March 2021), Tanzania (April 2021), and Mozambique (January 2022).</li> <li>Based on baseline assessment, three (3) potential pilot demonstration projects to introduce BAT identified where private sector participation is envisage: Recycling of Textile Discards (Lesotho); Composting of organic waste (Madagascar); and Material Recovery Facility (MRF) (Zambia). Technical studies are ongoing and will support environmental assessment and environmental permits for the construction of pilot project in Madagascar. Environmental and construction permits were granted for the construction of the MRF in Zambia. The site will be subject to additional environmental safeguards assessment by the World Bank.</li> </ul>	<input type="checkbox"/>
4	Higher cost of waste management measures may cause stakeholders to abandon the project activities; release reduction targets will not be confirmed and adopted in the national context.	Medium risk (M)	Low risk (L)	<p>Incentive and regulatory programmes, and direct technical and financial assistance will be included in the project to reduce or eliminate these risks. Adequate mechanisms for mobilizing private sector will be identified, developed and implemented. The release reduction targets will be aligned with the on-going national programs in order to set realistic and achievable targets in each participating country.</p>	<ul style="list-style-type: none"> <li>Implementation of waste management plans introducing BEP measures is ongoing in two selected municipalities in 6 participating countries using financial models/assistance to incentivize private sector involvement. It is likely that countries will complete their BEP pilot project in two selected sites by project planned completion.</li> </ul>	<input type="checkbox"/>

5	Due to low participation and interest of stakeholders and general public the project will not be able to create the critical mass of human resources to support BAT/BEP.	Low risk (L)	Low risk (L)	Dedicated workshops will address broader issues than uPOPs, such as waste management and related agricultural activities. BAT/BEP concerning open burning will be integrated in higher level education. Experiences from BAT/BEP Forums of other regions will also be used	<ul style="list-style-type: none"> <li>Regional and national training workshops on BAT/BEP measures as well as awareness raising campaigns on health and environmental risks associated with open burning practices carried out in all seven (7) participating countries.</li> </ul>	<input type="checkbox"/>
6	Effects of climate change will influence project implementation and minimize the results; GHG emissions from existing open burning activities and BAT/BEPs will not be considered; risks and changes in behavioral patterns arising from climate change (extreme weather events, changes in open burning practices and disaster management, etc.) will disable implementation of project components.	Low risk (L)	Low risk (L)	National Communications to the UNFCCC and other relevant assessments of vulnerability of all participating countries to the effects of climate change will be considered. All project components will introduce adaptation aspects in waste management sector of participating countries on the basis of their specific climate change related situation. Given the infancy stage of waste management in all participating countries, open burning activities and improperly managed landfills are significant contributors to greenhouse gas releases including carbon dioxide and monoxide (from improper waste burning) and methane and nitrogen oxides (due to anaerobic digestion of waste). Introducing BAT/BEP at the disposal sites will mitigate GHG emissions compared to the baseline situation. GHG emissions from new practices and BAT/BEP will be estimated and the reductions emphasized. Climate change adaptation aspects will be assessed for each demonstration site and strongly considered when identifying, developing and implementing BAT/BEP. If necessary and appropriate, international climate change expert will be involved to estimate mitigation/adaptation effects and requirements of specific project components and activities in detail.	<ul style="list-style-type: none"> <li>Effects of climate change not impacting project results at this stage.</li> <li>Pilot projects aiming to reduce open burning of solid waste will reduce GHG emission as a co-benefit. GHG reduction will be assessed by the Project.</li> <li>Harmonized methodology for uPOPs reduction set targets for participating countries and contribute to shaping actionable plans at municipal and national level. Reduction of open burning will also benefit reduction of GHG emission from the waste sector.</li> <li>Climate change adaptation aspects are duly considered by international and national experts in the planning phase of pilot projects. Due attention is given to future environmental risks, including flooding, landslide etc.</li> </ul>	<input type="checkbox"/>
7	Delay in project implementation activities at project site due to COVID-19 pandemic	Low risk (L)	Low risk (L)	Reinforce revised timelines for implementation prepared	<ul style="list-style-type: none"> <li>Work plan for project countries revised considering the present crisis of COVID-19 pandemic</li> <li>Restrictions from COVID-19 have been lifted in all the participating countries in the second half of 2022.</li> </ul>	<input type="checkbox"/>

2. If the project received a sub-optimal risk rating (H, S) in the previous reporting period, please state the actions taken since then to mitigate the relevant risks and improve the related risk rating. Please also elaborate on reasons that may have impeded any of the sub-optimal risk ratings from improving in the current reporting cycle; please indicate actions planned for the next reporting cycle to remediate this.

The project did not receive sub-optimal risk rating in the previous PIR. The Risk rating for the previous year (FY22) was at moderate (M).

3. Please indicate any implication of the **COVID-19** pandemic on the progress of the project.

Restrictions on movements due to COVID-19 were lifted in the sub-region in the second half of 2022 and field works/visits have resumed. An in-person regional workshop training was conducted in November 2022 in Dar es Salaam, Tanzania. The 7<sup>th</sup> PSC meeting was also held in person with representatives from all participating countries. An expert mission was conducted in Madagascar to plan the implementation of a composting plant for organic waste in the municipality. UNIDO also conducted field visits to 5 laboratories of the project participating countries to assess and upgrade existing laboratories in 4 participating countries in March and May 2023.

4. Please clarify if the project is facing delays and is expected to request an **extension**.

The project is facing delays, especially regarding the implementation of BAT/BEP pilot demonstration projects in Lesotho, Madagascar, and Zambia for the recycling of textile discards, composting of organic waste, and establishment of a material recovery facility. The restrictions imposed by COVID-19 in the sub-region has greatly affected implementation of these pilot projects. Additionally, identifying a local investor to host the recycling of textile discards pilot project in Lesotho had been a problem as LNDC failed to secure a warehouse that could be used to host the pilot project. As for the Composting pilot project in Madagascar, the local partners (the ministry and Antsirabe municipality) have failed to provide to UNIDO a reliable cost-estimate for the construction of the facility of the pilot project. As for the MRF project, the potential investor (WMZL) identified by the LCC failed to secure the needed funds to construct the MRF facility. The local executing agency (ZEMA) successfully engaged the work bank for co-financing the construction of the facility.

Furthermore, some countries are facing delays in implementing timely BEP pilot projects at municipal level. UNIDO had to replace the implementation of the BEP pilot project in Botswana, which had still not signed the execution agreement, with a proposed paper recycling project in the Government Enclave within the capital city, Gaborone.

Nevertheless, countries hosting the BAT/BEP pilot demonstration projects have made significant progress towards implementing pilot projects since the last reporting period, and it is expected that pilot projects should be successfully completed before the expected project completion date in May 2025. No extension would be needed at this point.

5. Please provide the **main findings and recommendations of completed MTR**, and elaborate on any actions taken towards the recommendations included in the report.

**Main Findings of the Mid-Term Review (MTR):**

For this midterm evaluation, given the Covid19 pandemic, no field visits were undertaken. The assessment was mainly based on in-depth review of project documentation, skype (zoom, WhatsApp, or other forms of communication) interviews, and email communications. Based on the findings of the review and the discussions held, the evaluation came to the following conclusions.

**Relevance:** The project is addressing the issue of open burning, one of the priorities identified in the countries' national implementation plans of the Stockholm Convention and is consistent with the GEF5 strategy on Chemicals and Waste.

**Efficiency:** Due to a slow start and the Covid19 pandemic, the delivery of outputs has been significantly affected. Despite the active involvement of key stakeholders, the significant contribution of municipalities at the pilot sites as well as application of some cost-effective measures such as using most efficient options to hire consultants and service providers or building on previous initiatives, efficiency is considered moderately unsatisfactory.



**Effectiveness:** The assessment for this criterion was done at three levels: the achievement of outputs and outcomes and the likelihood of impact (behavioral change). The assessment of outputs and outcomes was based on the availability of their respective indicators. The project has not performed satisfactorily regarding achievement of outputs. The ratings for the 14 outputs are as follows: satisfactory: 3 outputs; moderately satisfactory: 1 output; moderately unsatisfactory: 5 outputs; unsatisfactory: 4 outputs; and highly unsatisfactory: 1 output. The four (4) substantive project outcomes have been rated moderately unsatisfactory, unsatisfactory, unsatisfactory and satisfactory respectively. Nevertheless, there are already some visible signs of impact at the project sites.

**Sustainability:** Some financial, institutional framework and governance as well as sociopolitical risks that may jeopardize the project sustainability have been identified. On the other hand, risks for the environmental dimension are considered low.

**Monitoring and evaluation:** The logical framework proposed in the project document is adequate to allow for tracking of results and proper monitoring of progress. The monitoring and evaluation system is in place and the set of indicators in the project results framework are being used by the project team for an adequate monitoring and evaluation of the implementation process. All the planned project steering committee meetings have been held and the expected reports, such as the project implementation review reports, have been timely submitted.

**Project management:** The project is being satisfactorily managed by national project teams under the adequate guidance and supervision of UNIDO. However, the late issuance of contracts to countries and the non-recruitment of a regional project coordinator have contributed to a slow start of project

Assessment of the project		
	Evaluation criteria	Rating
<b>A</b>	<b>Project Design</b>	MS
<b>B</b>	<b>Implementation performance</b>	
1	• Relevance	HS
2	• Effectiveness	MU
3	• Efficiency	MU
4	• Sustainability of project outcomes	ML
5	• M & E systems	S
6	• Project management	MS
<b>C</b>	<b>Gender mainstreaming</b>	S
	<b>Overall assessment</b>	MS

### **Recommendations of MTR**

<b>To UNIDO:</b>	
	1. The project has already been granted a two-year extension. However, the evaluation considers that this extension may not be sufficient for the successful completion of project implementation. Due to a slow start, the project suffered a delay of almost two years. With the pandemic outbreak, implementation was further delayed by at least one year. The evaluation therefore recommends another project extension of one year to allow for a smooth and successful completion of project activities that would contribute to achieve all the project objectives, and hence increase the chances of sustainability of the project results.
<b>To UNIDO, RPC:</b>	
	2. During the monitoring of progress and the tracking of results, project management should ensure that all indicators (for project objective, outcomes and outputs) mentioned in the Project Results Framework of the Project Document are considered for reporting (PIRs),
<b>To UNIDO, UNITAR, RPSC:</b>	

<p>3. Currently, national data, information, and results of the project are reported in the regional database information system website: <a href="http://stopopenburning.unitar.org/">http://stopopenburning.unitar.org/</a> created by UNITAR. The project should put in place a mechanism such that this website would still be functional and be regularly updated after project closure.</p> <p>4. UNITAR will be undertaking a number of regional as well as national training workshops for the participating countries. As far as possible and feasible, it is recommended that the training material should be available in Portuguese and French as well. It is also recommended that translation services should be available in those languages if requested by the relevant country.</p>
<b>To UNIDO, RPSC:</b>
<p>5. The BAT/BEP pilot demonstration projects at the municipalities are key outputs of the project. Some challenges such as poor internet connection and language barrier were highlighted by the countries (municipalities) during the online training on BAT/BEP for the sound management of solid waste provided by TU Wien. To ensure successful implementation of these pilot demonstrations, it is recommended that TU WIEN be sub-contracted to provide a second set of training, preferably face-to-face if possible and feasible. It should be ensured that the training material be available in French and Portuguese, and translation service as well during the training sessions if required by the relevant country.</p>
<b>To UNIDO, RPC, RPSC, Countries:</b>
<p>6. A number of countries are lagging behind for a number outputs (Outputs 1.2; 2.2; 2.3 3.1 and 3.2) in terms of execution of activities or reporting for these outputs, and these should have been completed by Year 1, 2, or 3 of implementation. The project is currently in the 6<sup>th</sup> year of implementation, project management should closely monitor progress and ensure that these are completed in the shortest delay.</p>
<b>To UNIDO, RPSC, Countries:</b>
<p>7. Output 2.4 should have been completed by the end of Year 4 of implementation. Currently the project is in the 6<sup>th</sup> year of implementation, and activities for this output have not started yet. The evaluation recommends that the project take immediate actions to identify an existing laboratory (or two) in the region that could be strengthened to provide training to the participating countries on UPOPs monitoring (sampling and if possible, analysis).</p> <p>8. Awareness raising activities are planned for the last part of the project. It is recommended that women, children and population at risks (waste pickers, etc.) should be particularly targeted and the project should also consider involving local NGOs to carry out these activities.</p> <p>9. The pilot projects will soon be operational, and this will involve waste picker communities or associations. It is planned to raise their awareness regarding health risk posed by exposure to toxic chemicals at the dumpsites. The project should also consider providing them with personal protective equipment to protect their health and if possible, with small equipment such plastic or paper compactors as incentives to secure their engagement in the project (socio-economic benefits)</p> <p>10. Africa Institute has been sub-contracted to monitor project progress and measure impact indicators. In that context, it has developed an instrument (template) that it transmitted to the countries to gather information. It is understood that the countries are not timely reporting, it is recommended that countries should report as agreed to allow Africa Institute complete their work satisfactorily.</p>
<b>To UNIDO and Lesotho:</b>
<p>11. UNIDO is developing a regional initiative: <i>Promotion of circular economy in the textile and garment sector through the sustainable management of chemicals and waste in Lesotho, Madagascar and South Africa</i> (GEF ID</p>

10543), in which Lesotho is a participating country. Given that Lesotho is implementing the pilot project on the recycling of textile discard, it is recommended that the project should create linkages / synergies with this initiative.

Main actions taken to implement MTR recommendation:

- Component 2: Capacity-building is underway for national stakeholders, and UNIDO has further strengthened monitoring and enforcement capacities regarding uPOPs emission, with a series of regional and national workshops delivered during FY23. UNIDO is also currently planning the upgrading of laboratory capacities to sample and analyse uPOPs in the environment for participating countries.
- Component 3: Due the delays experienced in implementing the major pilot projects, largely due to the restrictions imposed by COVID-19, UNIDO extended the duration of the project in November 2022, to allow for a smooth and successful completion of project activities that would contribute to achieve all the project objectives, and hence increase the chances of sustainability of the project results. UNIDO is leading consultation with national stakeholders to accelerate the implementation of BAT/BEP pilot projects.
- Component 4: Face-to-face training on uPOPs emission and BAT/BEP has resumed in Q4 2022 and was completed in Q2 2023. UNIDO also has engaged SADC Secretariat and discussed with them the possibility of having the latter to host and maintain the regional website created by UNITAR. No commitment from SADC Secretariat has been secured yet, but it is possible that the Secretariat will respond positively to UNIDO's request. Furthermore, a series of targeted awareness raising workshops and seminars for waste pickers, women, children, and other vulnerable groups, have been conducted during FY23. Special emphasis will be given to the training of the trainers' concept, as UNITAR has developed a number of modules, videos, etc. to help the participating countries conduct national level workshops, seminars, etc.
- Across all components: to accelerate the delivery of activities, UNIDO further strengthened the technical expertise made accessible to countries and recruited a number of international and national experts, respectively working on laboratory upgrading for uPOPs analysis, planning of the composting pilot project under component 3 and selection of a textile recycling operator under component 3.

#### IV. Environmental and Social Safeguards (ESS)

1. As part of the requirements for **projects from GEF-6 onwards**, and based on the screening as per the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), which category is the project?

☐ Category A project

☐ Category B project

☐ Category C project

(By selecting Category C, I confirm that the E&S risks of the project have not escalated to Category A or B).

Please expand the table as needed.

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
(i) Risks identified in ESMP at time of CEO Endorsement	NA	NA	NA
(ii) New risks identified during project implementation (if not applicable, please insert 'NA' in each box)	NA	NA	NA

## V. Stakeholder Engagement

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes** regarding engagement of stakeholders in the project (based on the Stakeholder Engagement Plan or equivalent document submitted at CEO Endorsement/Approval).

During the reporting period, stakeholders' involvement was secured as follows:

- 7<sup>th</sup> Regional PSC meeting was held in Dar es Salaam, Tanzania on 24 November 2022. All seven (7) POPs Focal Points from project countries, two (2) representatives from Africa Institute, three (3) representatives from UNITAR attended the meeting.
- A second round of regional face-to-face training workshop was conducted in collaboration with UNITAR for thirty-two (32) experts from all participating countries in Dar es Salaam, Tanzania on 21-24 November 2023. Two national training workshops (NAT2&2) for experts from Tanzania were also conducted on 25-26 November 2022.
- From January to May 2023, UNITAR conducted a second round national (virtual) training workshops (NAT2) for all participating countries. The total number of participants trained was 177 with 77 females and 94 males.
- Nine (9) key training modules on BAT/BEP and reduction of open burning were introduced to participating countries during these training sessions and successfully contribute to capacity building, awareness raising and regional knowledge sharing.
- Regular meetings are planned between UNIDO project team and participating countries to monitor progress made in implementing national execution activities and implementation of BEP pilot projects at municipal level.
- In 2023 UNIDO international expert conducted extensive field missions to assess capacities of 5 laboratories in 3 participating countries (Tanzania, Eswatini and Botswana) in sampling and analysis of uPOPs. Upgrading of capacities to sample and analyse uPOPs in the environment will be provided to selected laboratories in the last semester of 2023 and 2024.
- On the implementation of a pilot project for textile recycling in Lesotho, LNDC on its website and the local newspaper in Lesotho, a call for identification of beneficiaries aiming to select a company to host the pilot project in textile discards in Lesotho. An information workshop was also conducted by LNDC to further engage the private sector.
- In order to fast-track the construction of a material recovery facility in Zambia, ZEMA engaged the World Bank, through ongoing infrastructure projects in Zambia, to support the construction of the facility. The World Bank is therefore providing cash co-financing to the project and will contribute to showcasing cooperation in the field of technical assistance to implement well-targeted investment at local level.
- All participating countries updated and submitted to UNIDO their co-Financing reports up to until the end of 2022.

2. Please provide any feedback submitted by national counterparts, GEF OFP, co-financiers, and other partners/stakeholders of the project (e.g. private sector, CSOs, NGOs, etc.).

During the 7<sup>th</sup> PSC meeting held virtually on 24<sup>th</sup> November 2022, project countries recommended the following:

- (i) existing laboratories should be upgraded for uPOPs sampling and analysis and UNIDO should provide technical expertise to assess the needs and confirm the upgrading plans. Priority will be given to those countries that are not currently hosting any of the specific BAT/BEP pilot projects.
- (ii) Small scale projects will be considered based on remaining funding from laboratory upgrade. Countries should share a concept highlighting their interest and rationale.
- (iii) The MTR evaluators' recommendations shall be taken into consideration and followed through until the conclusion of the project.
- (iv) Africa Institute's contract in conducting M&E for the project shall be renewed.

UNIDO shall engage SADC Secretariat by Q2 2023 on possibilities of collaboration including hosting and maintaining the regional project's website created by UNITAR.

Due to the high amount of organic waste in Antsirabe municipality in Madagascar, the municipality showed great interest in hosting the pilot composting plant supported by the project.

The textile industry in Lesotho is one of the biggest in Africa, and with such big industry comes waste in a form of textile offcuts. The ministry of Environment in Lesotho showed great interest in hosting the pilot project in recycling of textile discards, The ministry further recommended LNDC to take the lead role in implementing such project in Lesotho.

**3. Please provide any relevant stakeholder consultation documents.**

**7<sup>th</sup> virtual PSC meeting (24<sup>th</sup> November 2022) documents:**

- 5322\_Aide Memoire- 7th PSC meeting- 24th November 2022
- 5322\_Meeting Agenda- 7th PSC meeting- 24th November 2022
- 5322\_Proceedings- 7th PSC meeting- 24th November 2022
- 5322\_Signed Recommendations- 7th PSC meeting- 24th November 2022

**Countries Reports**

- 5322\_Eswatini\_PR3 report for NCC\_Aug2022
- 5322\_Eswatini\_Consolidated partial PR2 report for BEP Pilots\_May2023
- 5322\_Lesotho\_TOR\_Call for Expression of Interest Beneficiaries\_Textile\_Feb2023
- 5322\_Lesotho\_Advert\_LNDC website\_TOR Call Beneficiaries\_Textile\_March2023
- 5322\_Lesotho\_LNDC\_Information Workshop Report\_May2023
- 5322\_Madagascar\_Final Completion report for NCC\_Aug2022
- 5322\_Madagascar\_Financial Statement Report for NCC\_Aug2022
- 5322\_Mozambique\_Kickoff Report for BEP pilot project-Oct2022
- 5322\_Mozambique\_Launch Report for BEP pilot project-April2022
- 5322\_Mozambique\_Boane Workplan for BEP pilot project- Oct2022
- 5322\_Mozambique\_Manhica Workplan for BEP pilot project- Oct2022
- 5322\_Tanzania\_Consolidated PR3 report for NCC\_June2023
- 5322\_Tanzania\_Consolidated PR1 report for BEP pilot project\_July2023
- 5322\_Zambia\_Consolidated PR2 report for NCC\_June2023
- 5322\_Zambia\_MRF\_Action plan\_Construction of MRF\_May2023

**Cooperation Agreements (CAs) and/or Memorandum of Understanding (MoU) documents for BEP pilot projects in the two municipalities**

- 5322\_Eswatini- MoU signed with Matsapha Municipality- April2020
- 5322\_Eswatini- MoU signed with Siteki Town Council-EEA- Nov2019
- 5322\_Madagascar CA signed with Anteh-Tala municipalities\_March2022
- 5322\_Tanzania Cooperation Agreement signed with Ubungu municipality- Oct2021
- 5322\_Zambia Cooperation Agreement signed with Chongwe Municipality- Feb2020
- 5322\_Zambia Cooperation Agreement signed with Livingstone Municipality- Feb2020
- 5322\_Lesotho MoU\_ MTEC and MLGC for BEP pilot project- July2022
- 5322\_Mozambique CA signed with Boane municipality- Oct2022
- 5322\_Mozambique CA signed with Manhica municipality- Oct2022

**Memorandum of Understanding (MoU) for MRF project**

- 5322\_MoU\_LCC and WMZL\_Sept2022
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**Memorandum of Understanding (MoU) for Composting pilot project**

- 5322\_Madagascar\_Protocole de Partenariat DREDD-CUAB\_Signe\_Avril2023
- 5322\_Madagascar\_TDR Protocole de partenariat\_DREDD\_CUAB\_avril2023
- 5322\_Madagascar\_Délibération CM- Projet mise en place d'une usine de compostage-avril2022
- 5322\_Madagascar\_Délibération CM- terrain d'implantation du site de compostage\_avril2022

**Co-financing reports**

- 5322\_Botswana co-financing report- 2016 to 2022- Received March2022
- 5322\_Eswatini\_Co-financing report\_2017 to 2022\_June2023
- 5322\_Lesotho\_Co-financing report\_2016 to 2022\_June2023
- 5322\_Madagascar\_Co-financing report\_2016 to 2022\_Feb2023
- 5322\_Mozambique\_Co-financing report\_2016 to 2022\_Feb2023
- 5322\_Tanzania\_Co-financing report\_2018 to 2022\_April2023
- 5322\_Zambia\_Co-financing report\_2016 to 2022\_April2023

**UNITAR reports for the reporting period**

- 5322\_UNITAR NAT1-2 report for Tanzania\_Nov2022
- 5322\_UNITAR REG2 report for SADC countries\_Nov2022

**Minutes of conference calls meetings with some project countries for the reporting period**

- 5322\_Minutes\_Meeting\_UNIDO\_LCC\_Livingstone\_November2022
- 5322\_Minutes\_Meeting\_ZEMA\_WM\_Nechem\_Livingstone\_Dec2022
- 5322\_ZEMA\_Mission report to Livingstone\_Jan2022
- 5322\_Minutes\_Zoom meeting\_UNIDO\_DWMPC\_May2023

**Project progress reports**

- 5322\_RC Final report\_Dec2022
- 5322\_RC Progress Report\_Jan & Feb2023

- 5322\_RC Progress Report\_March2023
- 5322\_RC Progress Report\_April2023
- 5322\_RC Progress Report\_May2023
- 5322\_RC Progress Report\_June2023
- 5322\_BTOMR\_RC\_Lab assessment mission to Tanzania\_March2023
- 5322\_BTOMR\_RC\_Lab assessment mission\_Botswana\_Lesotho\_Eswatini\_May2022

## VI. Gender Mainstreaming

1. Using the previous reporting period as a basis, please report on the **progress** achieved on implementing **gender-responsive measures** and **using gender-sensitive indicators**, as documented at CEO Endorsement/Approval (in the project results framework, gender action plan or equivalent),.

Gender considerations in POPs management plays a crucial role because of the transfer of POPs chemicals from childbearing mothers to unborn children making this group in particular risk. In most of the project countries, women and children are predominant as waste pickers in dumpsites that receives large organic and inert rubbish and where open burning activities is taking place. Little they know the negative effect on their health due to unhygienic conditions and nature of their work that exposes them to infectious diseases and toxic substances that may cause illnesses.

A total of 821 people including 364 women and 451 men have been engaged in the project. This represents a 44% of female participation. Women engaged in the project participated and benefited from workshops, seminars conducted at the regional and national levels and received targeted information related to specific gender implications and risks related to POPs. The project also developed capacity-building and awareness raising material promoting women inclusion in the waste management sector at decision-making level and in formal employment opportunities.

## VII. Knowledge Management

1. Using the previous reporting period as a basis, please elaborate on any **knowledge management activities** / **products**, as documented at CEO Endorsement / Approval.

- The tool for waste management plans developed by TU Wien is an innovative IT-based tool allowing municipal stakeholders to visualize waste flow and to develop waste management plans based on quantities, constraints and technologies available
- A techno-economic study in Maputsoe District in Maputsoe, Lesotho, as part of implementing the Recycling of Textile Discards has been completed by Lesotho National Development Corporation (LNDC) in Lesotho.
- A Call for Expression of Interest Beneficiaries for the textile discards pilot project in Lesotho, developed by UNIDO and published by LNDC on its website and on the local newspaper. An information workshop for potential investor who may be interested in hosting the pilot project in textile discards was conducted by LNDC.
- Cooperation Agreements (CAs) and/or Memorandum of Understanding (MoU) documents for establishing BEP pilot projects in two municipalities were signed in six (6) countries.
- One Memorandum of Understandings (MoU) was signed for the MRF pilot project in Zambia as part of a PPP agreement between municipality of Livingstone and private operator.
- Plans for establishing Recyclable Collection Centres (RCCs) prepared by two (2) countries, and

Material Recovery Facilities (MRFs) by one country.

- Draft Waste Management Plans (WMPs) prepared by five (5) countries.
- Awareness raising materials developed by Lesotho and UNITAR.
- Nine (9) e-learning training modules were developed by UNITAR, three of which include videos. Each module is composed of a guidance document and a PPT. UNITAR will hold regional training workshop for the participating countries this year (2022). Below is the list of the modules developed by UNITAR:
  1. BAT/BEP concept, procedures, and guidelines on reduction and/or elimination of open burning of waste and agricultural residues- VIDEO IS INCLUDED.
  2. Preventing irrational dumping of waste
  3. Preventing open burning practices
  4. Promoting occupational health safety and hygienic measures at the landfill sites
  5. Best practices in waste management in relation to open burning of waste including case studies-
  6. The role of private and informal sectors in waste recycling
  7. Waste-to-energy concepts (e.g. biomass waste recycling and disposal options)
  8. Developing waste management regulations and compliance mechanisms
  9. COVID-19 and the sound management of medical/ healthcare waste

**2. Please list any relevant knowledge management mechanisms / tools that the project has generated.**

#### **TU Wien Tools and Documents**

- 5322\_TU Wien- Case study- Busia Uganda- Solid Waste Management Plan- Dec2020
- 5322\_TU Wien- Toolkit of Solid Waste Management Plan- Dec2020
- 5322\_TU Wien WAPLA software manual for preparing Solid Waste Management Plan- Dec2020
- 5322\_TU Wien-Template document for designing Solid Waste Management Plan- Dec2020

#### **Techno-Economic Study documents for the Recycling of Textile Discards pilot project**

- 5322\_LNDC Feasibility Study of Techno-Economic Study- Dec2021
- 5322\_LNDC Marketing Survey of Techno-Economic Study- July2021
- 5322\_LNDC Detailed inventory report on textile discards- March2021

#### **Madagascar documents & UNIDO International Expert documents**

- 5322\_ICT\_Preliminary study report on the construction of Composting plant
- 5322\_Madagascar\_Waste collection system\_Antsirabe\_Eng\_Sept2022
- 5322\_Madagascar\_Strategy sorting\_collection\_transportation\_Antsirabe\_Eng\_Dec2022
- 5322\_Madagascar\_Etude\_Système\_Collecte\_Antsirabe\_French\_Septembre2022
- 5322\_Madagascar\_Stratégie\_Déchets\_CUABE\_Antsirabe\_French\_Décembre2022
- 5322\_Madagascar\_layout\_composting\_plant
- 5322\_Madagascar\_SOPs\_composting\_plant
- 5322\_Madagascar\_business\_plan\_composting\_plant
- 5322\_business\_plan\_tool

#### **Plans for establishing Recyclable Collection Centers (RCCs) & Material Recovery Facility (MRFs)**



- 5322\_Eswatini Plans for establishing RCCs in two municipalities\_June2021
- 5322\_Zambia Plan for establishing RCCs in Chongwe municipality- Aug2021
- 5322\_Zambia Plan for establishing RCCs in Livingstone municipality- Aug2021
- 5322\_Madagascar\_Plan for establishing RCC\_Antsirabe\_Eng\_March2023
- 5322\_Madagascar\_RCC\_CUABE\_Antsirabe\_French\_Mars2023
- 5322\_Tanzania\_MRF plan\_Kigamboni Lingato ward\_Feb2023
- 5322\_Tanzania\_MRF plan\_Ubungu Goba ward\_Feb2023
- 5322\_Tanzania\_MRF plan\_Ubungu Kimara ward\_Feb2023

#### **Waste Management Plans documents**

- 5322\_Eswatini draft WMP for Kwaluseni Inkhundla municipality- April2021
- 5322\_Eswatini draft WMP for Malindza Chiefdom municipality- April2021
- 5322\_Lesotho draft WMPs for Maseru and Maputsoe municipalities- May2021
- 5322\_Zambia draft WMP for Chongwe municipality- Aug2021
- 5322\_Zambia draft WMP for Livingstone municipality- Aug2021
- 5322\_Madagascar\_Draft WMP Antehiroka municipality\_Oct2022
- 5322\_Madagascar\_Draft WMP Antsirabe municipality\_Oct2022
- 5322\_Madagascar\_Draft WMP Talatamaty municipality\_Oct2022
- 5322\_Tanzania\_Draft WMP Kigamboni municipality\_Feb2023
- 5322\_Tanzania\_Draft WMP Ubungo municipality\_Feb2023

#### **Lesotho Awareness Raising Materials**

- 5322\_Lesotho 3Rs Billboard- Dec2021
- 5322\_Lesotho 3Rs Brochure- Dec2021
- 5322\_Lesotho 3Rs Poster- Dec2021
- 5322\_Lesotho Billboard poster- Dec2021
- 5322\_Lesotho Brochure on solid waste management- Dec2021
- 5322\_Lesotho Consolidated Publicity Materials- Dec2021

#### **UNITAR Awareness Raising Materials**

- 5322\_UNITAR general leaflet
- 5322\_UNITAR general public- do not burn waste poster1
- 5322\_UNITAR PPE for waste picker poster
- 5322\_UNITAR waste picker – what is open burning of waste poster
- 5322\_UNITAR waste picker poster1
- 5322\_UNITAR waste picker poster2
- 5332\_UNITAR general public segregate your waste

#### **UNITAR Modules, Documents, Videos and Website link**

- 5322\_UNITAR\_Module1\_Guidance document\_Best practices in WM- March2022
- 5322\_UNITAR\_Module1\_PPT presentation\_Best practices in WM- March2022
- 5322\_UNITAR\_Module2\_Guide doc\_Practices to prevent obw\_March2022

- 5322\_UNITAR\_Module2\_PPT\_Practices to prevent obw\_March2022.
- 5322\_UNITAR\_Module3\_Guide doc\_Developing WM regulations\_March2022.
- 5322\_UNITAR\_Module3\_PPT presentation\_Developing WM regulations- March2022.
- 5322\_UNITAR\_Module4\_Guidance document\_Preventing and abandonment of littering of waste-March2022.
- 5322\_UNITAR\_Module4\_PPT presentation\_Preventing and abandonment of littering of waste-March2022.
- 5322\_UNITAR\_Module5\_BAT BEP Guidance document- March2022.
- 5322\_UNITAR\_Module5\_PPT presentation\_BAT BEP Guidance document- March2022.
- 5322\_UNITAR\_Module6\_Guide doc\_Private sector and waste recycling\_March2022.
- 5322\_UNITAR\_Module6\_PPT\_Private sector and waste recycling\_March2022.
- 5322\_UNITAR\_Module7\_Guide doc\_Promoting health and saftey at Lfills\_March2022.
- 5322\_UNITAR\_Module7\_PPT\_Promoting health and saftey at landills\_March2022.
- 5322\_UNITAR\_Module8\_Guidance doc\_Waste to energy concepts- March2022.
- 5322\_UNITAR\_Module8\_PPT presentation\_Waste to energy concepts- March2022.
- 5322\_UNITAR\_Module9\_Guide doc\_COVID-19 and the SM of Med-HCW\_March2022.
- 5322\_UNITAR\_Module9\_PPT\_COVID-19 and the SM of Medical-HCW\_March2022.
- 5322\_UNITAR\_Links to videos of modules 1, 5 and 6- March2022.
- 5322\_Regional Website: <http://stopopenburning.unitar.org/>

## VIII. Implementation progress

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes achieved/observed** with regards to project implementation.

Progress made during the reporting period is as follows:

### **Outcomes 1 & 2:**

- Reports covering the establishment of national databases information systems; review and strengthening of country action plans for managing and phasing out the open burning of waste and agricultural residues; identification of two (2) municipalities to carry out waste management best practices (BEP); and carrying out national workshops on best practices in waste management as well as carrying out national awareness raising seminars on waste management plans submitted by all project participating countries (Botswana, Eswatini, Lesotho, Madagascar, Mozambique, Tanzania and Zambia).
- In early 2023 UNIDO hired an expert in sampling and analysis of uPOPs to assess existing laboratories in the participating countries, UNIDO expert visited 5 laboratories in 4 participating countries in March and May 2023. Development of technical specifications for upgrading of capacities of participating laboratories in sampling and analysis uPOPs in the environment is ongoing. Technological upgrading and capacity building should be completed in the first semester of 2024.

### **Outcome 3:**

- For the BEP pilot projects in the participating countries, The Ministry of Land and Environment in Mozambique signed Cooperation Agreements with the two municipalities. Both Madagascar and Tanzania completed the draft waste management plans in the two municipalities. Tanzania also submitted to UNIDO plans for establishing MRFs in the two municipalities (3 in total).

- Botswana has conducted the baseline studies for the two selected districts for the BEP project, but was not able to either sign an execution agreement at national level for pilot projects conducted by municipalities or to allow municipalities to sign the said agreement with UNIDO. Consequently, the execution agreement for implementation of BAT/BEP at municipal level was still not signed and UNIDO proper to execute activities related to BAT/BEP implementation and circular economy approaches at a recycling company.
- The Project conducted a second round of regional face-to-face training workshop for the project participating countries which was held in Dar es Salaam, Tanzania on 21-24 November 2022. Moreover, UNITAR conducted the second round of national virtual training workshops (NAT2) for participating countries from January to May 2023.
- In early 2023, UNIDO worked with LNDC to identify and to select an existing textile company in Maseru and Maputsoe area to host the pilot project in textile discards. The TOR for the Call for identification of project beneficiaries to identify a partner was developed by UNIDO in February 2023. During the months of March, April, and part of May 2023, the LNDC started and completed publishing of the TOR document on its website and the local newspaper. An information workshop for the potential investors was also held in Mid-April 2023 with the information workshop report submitted by LNDC to UNIDO on 24 May 2023. The final deadline for receiving proposals from potential investors was 7 May 2023. UNIDO is currently evaluating the proposals submitted by companies interested in hosting the pilot project in textile discards.
- The Environmental Impact Assessment (EIA) permit and construction permit for the Composting pilot project are expected to be obtained in Q3 of 2023. In January 2023, UNIDO finalized and published a TOR for provision of Engineering Services to construct the facility of the Composting pilot project in Antsirabe municipality in Madagascar. Final report including construction plans is expected in July 2023.
- For the Material Recovery Facility (MRF) pilot project to be hosted by Zambia, the equipment for the pilot project were purchased and delivered to Livingstone City (where the pilot project will be established) in June 2022. The MRF will be established for recycling of valuable waste fractions including metal, plastic and paper. Enhancing recovery of material for reduction of solid waste and open burning is a strategic approach in Livingstone, where tourism and a large concentration of hotels enables successful piloting of waste sorting at source. A local operator for the MRF was selected by the Livingstone City Council in 2021. Construction of the facility is ongoing in partnership with the World Bank, successfully mobilized in the project by the Zambia Environment Management Agency.

#### **Outcome 4:**

- UNITAR conducted the second regional face-to-face training workshop to the participating countries in Dar es Salaam, Tanzania on 21-24 November 2022. Furthermore, UNITAR has also conducted national (virtual) training workshops to the project participating countries in the first and second quarter of 2023. During this period (Q1 & Q2), UNIDO also has managed to translate the nine modules developed by UNITAR into French and Portuguese.

#### **Outcome 5:**

- The 7<sup>th</sup> PSC meeting held in Dar es Salaam, Tanzania on 24<sup>th</sup> November 2023 and it was attended by Focal Points and/or their representatives from all project countries, UNITAR, Africa Institute, and UNIDO.

#### **Challenges that affected implementation of project's activities include:**

- Even though, the restrictions imposed in the sub-region due to COVID-19 pandemic have been completely lifted by mid 2022, participating countries are still feeling the effect that such restrictions have had in implementing project activities.
- Participating countries have continued to experience difficulties in allocating lands to set up Recyclable Collection Centres as part of implementing BEP measures in selected municipalities in the countries. Additionally, obtaining of required permits has continued to become a problem.
- Due to COVID-19 restrictions imposed in the sub-region during 2020 to 2022, a significant increase in the cost of building materials was experienced by some countries. Such increase in cost of building materials, has adversely affected the ability of some countries to construct all the RCCs agreed upon in the contracts they signed with UNIDO. As the result, some contracts needed to be

amended to reflect the downsizing of the number of RCCs in some countries.

- The process of obtaining of the Environmental Impact Assessment Permit for the Composting pilot project to be established in Antsirabe municipality in Madagascar is taking long to complete. Additionally, the Engineering Department within Antsirabe municipality could not provide UNIDO with a reliable cost estimate for constructing the facility of the warehouse that would host the Composting pilot project. Hence, UNIDO decided to hire an engineering company to provide engineering services to help constructing the Composting pilot project's facility in the shortest time possible.
- Identifying a local partner or investor to host the textile discards pilot project in Lesotho had been a problem as most of the tenants (textile companies) of the warehouses managed by LNDC are under long term leases. Additionally, it has been taking LNDC a long time to publish UNIDO's TOR for selecting an existing textile company in Lesotho to host the pilot project, and as the result, the selection of an existing textile company in Maseru or Maputsoe industrial parks is taking longer than expected.
- Failure of Waste Master Zambia Ltd (WMZL) to allocate funds to construct the MRF facility as per the MoU it (WMZL) signed with Livingstone City Council (LCC), caused significant delays in starting of the MRF project in Livingstone, Zambia. As the result, ZEMA needed to approach the World Bank seeking its help with constructing the MRF facility. ZEMA is still engaging the World Bank and the construction of the MRF facility has not started yet.
- UNIDO has experienced some challenges in renewing Africa Institute's contract for performing M&E for the project. This might have caused delays in following through the documents (templates) prepared by the Institute with project countries.

2. Please briefly elaborate on any **minor amendments**<sup>6</sup> to the approved project that may have been introduced during the implementation period or indicate as not applicable (NA).

Please tick each category for which a change has occurred and provide a description of the change in the related textbox. You may attach supporting documentation, as appropriate.

<input type="checkbox"/>	Results Framework	N/A
<input type="checkbox"/>	Components and Cost	N/A
<input type="checkbox"/>	Institutional and Implementation Arrangements	N/A
<input type="checkbox"/>	Financial Management	N/A
<input type="checkbox"/>	Implementation Schedule	An extension was granted by GEF until 05/31/2025
<input type="checkbox"/>	Executing Entity	N/A
<input type="checkbox"/>	Executing Entity Category	N/A
<input type="checkbox"/>	Minor Project Objective Change	3 specific BAT/BEP pilot demonstration projects initiated in three project countries: recycling of Textile Discards in Lesotho, Composting of organic waste in Madagascar, and Material Recovery Facility (MRF) project in Zambia.
<input type="checkbox"/>	Safeguards	N/A
<input type="checkbox"/>	Risk Analysis	N/A
<input type="checkbox"/>	Increase of GEF Project Financing Up to 5%	N/A
<input type="checkbox"/>	Co-Financing	N/A
<input type="checkbox"/>	Location of Project Activities	

<sup>6</sup> As described in Annex 9 of the *GEF Project and Program Cycle Policy Guidelines*, **minor amendments** are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5%.

		N/A
<input checked="" type="checkbox"/>	Others	
<input type="checkbox"/>		Change of UNIDO project manager

### 3. Please provide progress related to the **financial implementation** of the project.

For FY23, funds were disbursed as follows:

- Under outcome 2 for international expertise and local travel: 32,000 USD disbursed for recruitment of international expert and missions to participating countries to assess current capacities of laboratory in uPOPs sampling and analysis and evaluate needs for upgrading
- Under outcome 3: approx. 110,000 USD disbursed for technical experts needed for the planning of pilot projects related to implementation of BAT/BEP, funds disbursed for technical assessment on-site and approx. 30,000 USD for subcontracting local engineering firms in charge of developing construction plans for pilot project in Madagascar
- Under outcome 4, outcome 5 and M&E Approx. 30,000 USD disbursed for monitoring and coordination work

## IX. Work Plan and Budget

1. Please provide **an updated project work plan and budget** for the remaining duration of the project, as per last approved project extension. Please expand/modify the table as needed.

*Please fill in the below table or make a reference to a file, in case it is submitted as an annex to the report.*

Outputs by Project Component	Year 2023		Year 2024				Year 2025		GEF Grant Budget Available (US\$)
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
<b>Component 1 – uPOPs baseline information on open burning practices and inventory of major dumpsites/landfills in participating countries</b>									
Outcome 1: Updated regional information on current open burning practices and establishment of uPOPs baseline inventories									972.96 USD
Output 1.1: National information on current locations of open burning practices validated and updated uPOPs inventories reviewed									
Output 1.2: Regional information on open burning practices and data on uPOPs releases exchanged and respective regional cooperation and networking consolidate	x								
<b>Component 2 – Regulatory / Legal framework review, policy development and institutional strengthening</b>									
Outcome 2: Strengthened legislation and human resources capacity in implementing BAT/BEP at selected priority sites of open burning									160,382.71 USD
Output 2.1: Regulatory measures aimed at discouraging open burning practices of different waste streams and agricultural residues formulated or amended									
Output 2.2: Country action plans for managing and phasing out the open burning of waste and agricultural residues reviewed and strengthened	x	x							
Output 2.3: Regional BAT/BEP guidance for uPOPs reduction formulated for respective Ministry of Environment's adoption at country level for substantial reduction and/or collective elimination of waste and agricultural residues in open burning practices	x	x	x						

Output 2.4: Adequate technical infrastructure for implementing BAT/BEP and waste management best practices built	x	x	x	x	x				
<b>Component 3 – Pilot demonstration of BAT/BEP in selected priority sites</b>									
Outcome 3: Implementation of BAT/BEP to reduce uPOPs releases in the open burning sector at national and regional levels									2,022,785.91 USD
Output 3.1: Waste management best practices carried out at two (2) selected priority demonstration municipalities in each participating country	x	x	x	x					
Output 3.2: Waste management plans introducing BAT/BEP measures (segregation system) developed and implemented in two (2) selected major dumpsites and landfills in the participating countries using PPP models	x	x	x	x					
Output 3.3: Biomass waste recycling and disposal options promoted in two (2) demonstration sites in selected participating countries through alternative waste management plans for better value addition	x	x	x	x	x	x	x	x	
Output 3.4: Harmonized methodology developed to set-up uPOPs release reduction targets for open burning sector at regional level	x	x	x	x	x	x	x	x	
Output 3.5: Socio-economic impacts of the project intervention on private and informal sectors including recycling business plans assessed	x	x	x	x	x	x	x		
<b>Component 4 – Information dissemination and awareness raising</b>									
Outcome 4: Knowledge transfer on BAT/BEP for replicability and awareness raising on uPOPs related risks and exposure in open burning sector									90,087.11 USD
Output 4.1: Targeted training and awareness campaigns emphasizing health and environmental risk and exposure hazards of open burning practices for all relevant target groups observing appropriate gender representations (decision makers, professional associations, women/youth group associations, community leaders, farmers, women's groups, private industries, waste pickers, NGOs, media and the public at large) carried out	x								
Output 4.2: Educational programmes for introduction of lessons learned and alternatives to open burning practices established at all levels in each participating country	x	x	x	x	x	x	x	x	
Output 4.3: Regional cooperation on BAT/BEP and uPOPs and information sharing established through the BAT/BEP Forum	x	x	x	x	x	x	x		
<b>Component 5 – Monitoring and evaluation of results</b>									
Outcome 5: Design and implementation of Monitoring and Evaluation (M&E) framework in accordance with UNIDO and GEF requirements									126,957.07 USD
Output 5.1: Project intervention monitored, and project progress evaluated	x	x	x	x	x	x	x	x	
Project Management	x	x	x	x	x	x	x	x	92,259.44
Mid term review									2,429.83
Terminal evaluation									40,000.00

## X. Synergies

### 1. Synergies achieved:

UNIDO is developing a regional initiative: *Promotion of circular economy in the textile and garment sector through the sustainable management of chemicals and waste in Lesotho, Madagascar and South Africa*

(GEF ID 10543), in which Lesotho is a participating country. Given that Lesotho is implementing the pilot project on the recycling of textile discards, the project should easily create linkages / synergies with this initiative.

In Mozambique, the National Directorate for Environment in partnership with the National Association of Municipalities and the National Fund for Sustainable Development in Mozambique is implementing since February 2019 an \$80 million project financed by the French Development Agency, NAMA Facility and GIZ, Germany. The project aim to prepare and review municipal waste management plans in Mozambique covering 20 municipalities out of 53 existing municipalities in the country. If the selected project municipalities (Boane or Manhica) will be included in the above, guidelines and tools for the preparation of the waste management plans will be made available.

The World Bank (WB) and Zambia Environmental Management Agency (ZEMA) are currently engaged in an initiative for implementing waste management projects in 4 municipalities in Zambia whereby the WB would provide various types of equipment for these projects. These municipalities include: Solwezi, Ndola, Kafue and Livingstone. ZEMA approached the WB and requested the latter if part of the funds allocated could be used to construct the MRF facility to be established in Livingstone. The WB agreed to ZEMA's proposal as the MRF facility complements the WB's initiative in implementing projects in waste management issue in the country.

### 3. Stories to be shared (Optional)

N/A

## XI. GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate.

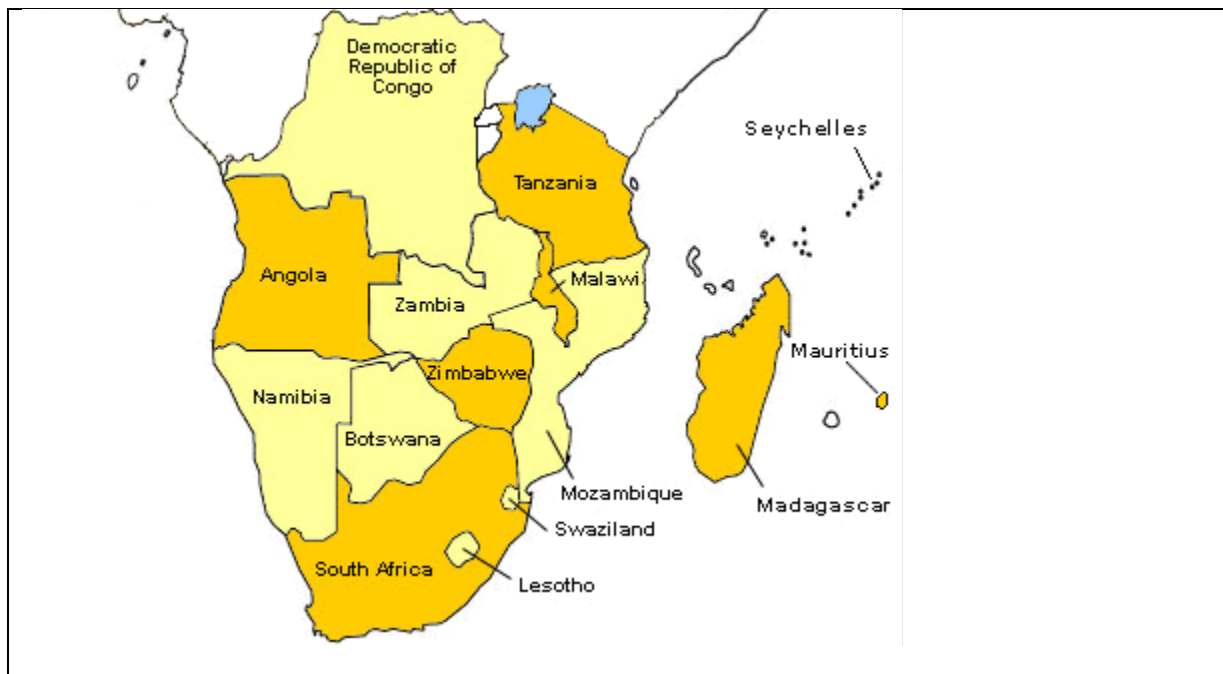
Web mapping applications such as [OpenStreetMap](#) or [GeoNames](#) use this format. Consider using a conversion tool as needed, such as: <https://coordinates-converter.com>

Please see the Geocoding User Guide by clicking [here](#)

Location Name	Latitude	Longitude	Geo Name ID	Location and Activity Description
			934989	

Matsapha municipality, Eswatini	26.5	31.3	<a href="#">934989</a>	
Siteki municipality, Eswatini	26.4	31.9	<a href="#">932505</a>	
Maseru municipality, Lesotho	29.3	27,5	<a href="#">932505</a>	
Maputsoe municipality, Lesotho	28.9	27.9	<a href="#">1070940</a>	
Anteroika, municipality Madagascar	18.5	46.5	<a href="#">11926446</a>	
Talatomay municipality Madagascar	18.8	47.5	<a href="#">1069166</a>	
Antsirabe municipality Madagascar	19.9	47.0	<a href="#">7873983</a>	
Boane municipality Mozambique	24.6	32.4	<a href="#">1090080</a>	
Manhica municipality Mozambique	25.5	32.8	<a href="#">157763</a>	
Kigamboni municipality Tanzania	6.8	39.3	<a href="#">11003999</a>	
Ubungu municipality Tanzania	6.8	39.2	<a href="#">7910080</a>	
Chongwe municipality Zambia	15.4	28.6	<a href="#">910111</a>	
Livingstone municipality Zambia	17.9	25.8		

Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate.





Textile Discards pilot project: Maseru municipality, Lesotho; Latitude 29.3; Longitude 27.5

Composting pilot project: Antsirabe municipality, Madagascar: Latitude 19.9; Longitude 47.0

MRF pilot project: Livingstone municipality, Zambia: Latitude 17.9, Longitude 25.8

## EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2022 – 30 June 2023.
2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.
3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.
4. **Results-based management:** The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
<b>Highly Satisfactory (HS)</b>	Project is expected to achieve or exceed <u>all</u> its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as "good practice".
<b>Satisfactory (S)</b>	Project is expected to <u>achieve most</u> of its <u>major</u> global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
<b>Moderately Satisfactory (MS)</b>	Project is expected to <u>achieve most</u> of its major <u>relevant</u> objectives but with either significant shortcomings or modes overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environmental benefits.
<b>Moderately Unsatisfactory (MU)</b>	Project is expected to achieve <u>some</u> of its major global environmental objectives with major shortcomings or is expected to <u>achieve only some</u> of its major global environmental objectives.
<b>Unsatisfactory (U)</b>	Project is expected <u>not</u> to achieve <u>most</u> of its major global environmental objectives or to yield any satisfactory global environmental benefits.
<b>Highly Unsatisfactory (HU)</b>	The project has failed to achieve, and is not expected to achieve, <u>any</u> of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
<b>Highly Satisfactory (HS)</b>	Implementation of <u>all</u> components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as "good practice".
<b>Satisfactory (S)</b>	Implementation of <u>most</u> components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
<b>Moderately Satisfactory (MS)</b>	Implementation of <u>some</u> components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
<b>Moderately Unsatisfactory (MU)</b>	Implementation of <u>some</u> components is <u>not</u> in substantial compliance with the original/formally revised plan with most components requiring remedial action.
<b>Unsatisfactory (U)</b>	Implementation of <u>most</u> components in <u>not</u> in substantial compliance with the original/formally revised plan.
<b>Highly Unsatisfactory (HU)</b>	Implementation of <u>none</u> of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will assess the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives. Risk of projects should be rated on the following scale:	
<b>High Risk (H)</b>	There is a probability of greater than <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face high risks.
<b>Substantial Risk (S)</b>	There is a probability of between <b>51%</b> and <b>75%</b> that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
<b>Moderate Risk (M)</b>	There is a probability of between <b>26%</b> and <b>50%</b> that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
<b>Low Risk (L)</b>	There is a probability of up to <b>25%</b> that assumptions may fail to hold or materialize, and/or the project may face only low risks.