



Republic of Mozambique
Ministry of Land Environment and Rural Development
National Directorate of Environment

Technical Progress Report N1

Mozambique

**Promotion of BAT and BEP to reduce uPOPs releases from waste Open Burning
in the participating African Countries of SADC Sub-region**



Project nr150060

Contract 30000054933

Implementing Agency: UNIDO

Introduction

Open burning is an environmentally unacceptable process that generates chemicals listed in Annex C of the Stockholm Convention and numerous other pollutant products of incomplete combustion. Consistent with Annex C, Part V, section A, subparagraph (f) of the Stockholm Convention, the best guidance is to reduce the amount of material disposed of via this method with the goal of elimination.

1. Objectives

The objective of this project phase was the Followings:

- Inventory of open burning (dumpsites, agricultural and forests activities Gathering information (Provinces,Municipalities and district levels), with emphasis waste and biomass burning and other emissions resulting from open burning source Category .
- Open burning sources Mapping.
- Legal Framework Review.

Outcome 1

Activity 1-Identification and Engage National Experts

The National Expert that will together with the national project coordinator that will compose the project Management Unity (Mr Felicio Fernando/project coordinator and Mss Julia Ussy / national Expert) were identified and sent the his CVs to UNIDO office in Vienna in December 2017.

Unfortunately now Mss Julia Ussy, will not be with us in the project on the coming days, because of, she will follow the husband in Kenya, that

is a Diplomat on mission and working in Mozambican Embassy in Kenya (Kenya).

We are in the process for identification local Expert open burning for replacement of Ms Julia Ussy.

Outcome1 Activity 2

2.1 Scope of the work

Mozambique has 53 Municipalities divided into categories A, B and Small villages.

This Categorization was based on Size, Population and development level of the Cities and means also that they will have different level of challenges in terms of town city management including waste management.

The country has extension of 2800 km, from north to south.

The size of the country against the provided financial resources of this contract was clear from the begin, that will not be enough to cover the inventory logistic in all the 53 Municipalities still need to find additional financial resources or to find synergies with other countries programs or National comparticipation to fulfill the activities subject to this Outcome.

Additional Challenge was the language. The available books to the subject “Toolkit on identification and quantification of releases of Dioxin and Furans “are written in English and French, while the Mozambique is Portuguese Speaking Country. At end was the following scope of the work:

Sub Activities

1-Translation of the questionnaires of open burning category from English into Portuguese. (Household waste, Agricultural and forest waste, i.e. Biomass)

2-Technical meeting for discussion of open burning questionnaires and Methodology on gathering and filling questionnaires with the requested and required information.

3-Field work planning and Logistics

4- Discussion of Field Rapport and findings and Recommendations.

5- Open Burning Technical Project report nr 1

2.2Field work

The field Work was concentrated in 3 provinces located near Maputo namely Gaza, Inhambane and Maputo Provinces.

The team visited Municipal waste sectors, Sugar companies, forest and agricultural waste/ residues, firefighters offices.

The information/ Data from Other Municipalities of 7 provinces are based on desk Study.

Were visited the following Municipalities;

Inhambane Province: Massinga, Vilanculos, Inhambane, Maxixe Municipalities

Gaza Province: Xai-Xai, Bilene, Chibuto, Chokwe Municipalities

Maputo Province: Matola, Boane, Namaacha, Manhiça and Maputo Municipalities.

All the dumping sites was taken the geographical coordinates by GPS.

2.3 Findings of the Field work/site visit for gathering Information:

1-Open burning of waste are considered as measure for waste reduction

2-Most of the people are not aware on the risks and health implications of open burning.

3-In the municipalities there are recycling Initiatives and small recycling operators has not investment capital for infrastructures, such as conveyer belts to make easier the segregation.

4- The waste sectors of the Small Municipalities cannot sustain the waste management operations because of the lack of economic instruments for waste tax collections, or the collected tax are symbolic and does not cover the full waste management operations. The municipalities still need subsidies from the central government.

5-A lot of Municipalities a using former road projects borrow pits as dumpsites

6-The main recyclable collected in the Municipalities are Plastic and glass bottles and Paper /Carton.

7-The buyers of recyclables are factories plastic producers, brewers companies and recycling industries owned by Chinese Investors.

8-Municipalities are not complying with state solid waste regulations for different reasons, awareness or non-compliance.

9-Lack of governmental supervision to the local authority in all waste management cycle.

10- The dumpsites, bush fire and agricultural biomass burning continues to be major Sources of release of non-intentional POPs (Dioxins and Furans).

11-The Country has approximately 10-15% recycling capacity of the all waste produced.

12- Maputo and Matola dumpsites are the most critical dumpsites in terms of open burning. The open burning is 24 hours day.

2.4 Estimate on Daily solid/ household waste production of the same of the Municipalities in 2018

Nome do Município	Estimativas de quantidades de Resíduos Sólidos Urbanos produzidas diariamente em toneladas
Maputo	1.137
Matola	425
Xai - Xai	55
Inhambane	48
Maxixe	125
Beira	296
Quelimane	133
Chimoio	185
Tete	85
Nampula	380
Nacala Porto	154
Lichinga	55
Pemba	124
Boane	42
Namaacha	5
Manhiça	25
Gondola	23
Ilha de Moçambique	19
Mocuba	81
Angoche	19
Marrupa	15
Mandimba	16
Monapo	24
Ribaue	16
Malema	19
Marromeu	32
Dondo	35
Maganja da Costa	20
Macia	24
Alto Molocue	31
Chiure	19
Total	Aprox 3.667 Tons/day

2.4 Recommendations Outcome1 Activity 2

- a) The dimension of the open burning challenge in the Mozambican Municipalities, requires intervention with clear solutions through demonstration project.
- b) There is need to promote recycling private sector providing means waste segregation and capacity building.
- c) The Municipalities are not receptive for the donor programs that ending with Studies without infrastructures or other means to solve the challenger.
- d) Still need to be defined realistic actions including investments for the pilot projects.
- f) Taking into account the structure , financial resources and coverage of other oncoming waste management projects in Mozambique such as World bank project and Green Fund (from NAMA facility) , seems the SADC open burning project Mozambican component with Unido Technical assistance has very ambitious activities with low financial resources .

May before the end of the project or project review time be suggested to reduce proposed approach and the project scope of the Mozambican component.

Still need to be settled the clear indicator and the clear indication of pilot projects to be implemented in the selected Municipalities.

In order hand there is a need of Unido local Representative Mozambique to interact with ongoing World bank project, on Municipal Capacity building anchored in the Ministry State administration and Public Affairs for the possible Synergies between those 2 projects with similar activities.

This can be discussed with UNIDO regional Project Coordinator or Vienna.

Outcome 2 Activity 1- Initiate the process of development and reviewing existing Law and regulation, identify gaps and provide additional regulator provisions.

2.1.1 Legal Framework Overview

Mozambique has the following Regulations that can be considered related to the open Burning:

- 1-Solid waste Management regulation from 2014 (Decree nr 94/2014 Of December 31)
- 2-Hazarduos waste Management (Decree nr
- 3- Plastic Regulation (Decree nr 16/2015 of March 5
- 4-Waste Enlarged responsibility of producer (Decree nr 79/2018
- 5- Guideline on Controlled Dumpsites (Ministerial Diploma 31/2018 of March 30 under Decree nr 94/2014 Of December 31).
- 6- Regulation on control of bushfire and uncontrolled open burning

2.1.2 Review existing Law and regulation, identify gaps and provide additional regulator provisions.

Mozambique, has 2 big projects

-One Project aims for building human resources capacities concerning in municipal management and solid waste Management (Financed by World Bank).

Other is in the preparation phase to be financed by green fund and aims waste management (to promote waste segregation, recycling and reuse, including policy and legal framework development).

The decision made for preparation of those 2 projects was based partly on the gaps in the waste management regulation and policies.

In the preparation phases of those projects was taken into account the legal framework review

Those gaps also was taken into account and are valid for open burning SADC Mozambique component /UNIDO

2.1.3 Findings of the legal Review, Outcome 2-Activity 1

-All of regulations has clear provisions, Prohibitions, obligations and institutional responsibilities for all waste management cycle.

-The regulation has based on the “polluter pay principle” and also making a provision that is prohibited open burning of the waste and opens windows for filling regulation gaps with the operationalization and enforcement tools such as specific guidelines.

-The Municipalities are responsible for daily waste management and making By- laws in their jurisdiction areas and the have management autonomy.

2.1.3 Findings Outcom2-Activity 2

-There are Business opportunities for recyclables, but depends on market demand

Already there private companies and associations dedicated to the recycling business

- Such as recicla, Fertilizer, 3R Companies and other small associations including the scavengers

-In order to promote the recycling there is a need to address specific programs on segregation from the sources and recycling activities by providing needed resources and capacity for the Stakeholders.

-Recycling seems as the major way to avoid and reduce the Open burning

Note: Is very interesting what is going on in the last days in Mozambican Dumpsites:

-Because of the increase need on recyclable material, the people are going to the old dumpsites or where was disposed waste in the past to look for /excavate the recyclables, and this considerable reduces the waste piles or waste mountains around the Municipalities.

2.1.4 Identified gaps in the Legal Review

-There is a minimum requirements for establishment controlled dumpsite

(Ministerial Diploma 31/2018 of March 30 under Decree nr 94/2014 Of December 31)
but needs to be enforced

-Absence of waste recycling regulation.

-Lack of operating waste management guidelines.

-Legal instrument for Incentive waste management sector

Conclusions: All the activities namely 1-3 of the outcome 1, Activity 1-2 of the Outcome2 Were done according to the contract, although in some cases the project team used the Data and reports from other ongoing country programs

The data and reports of other country programmes can be considered as Synergies and he country comparticipation / contribution to the Open Burning and reflected in the financial report

Technical Team:

MITADER – National Directorate of Environment –

- Felício Fernando /Project Coordinator

- Júlia Ussy / Open Burnning Expert

- Sidónio Contage / Stockholm Convention Focal Point

-Leonildo Mungoi / Accountant

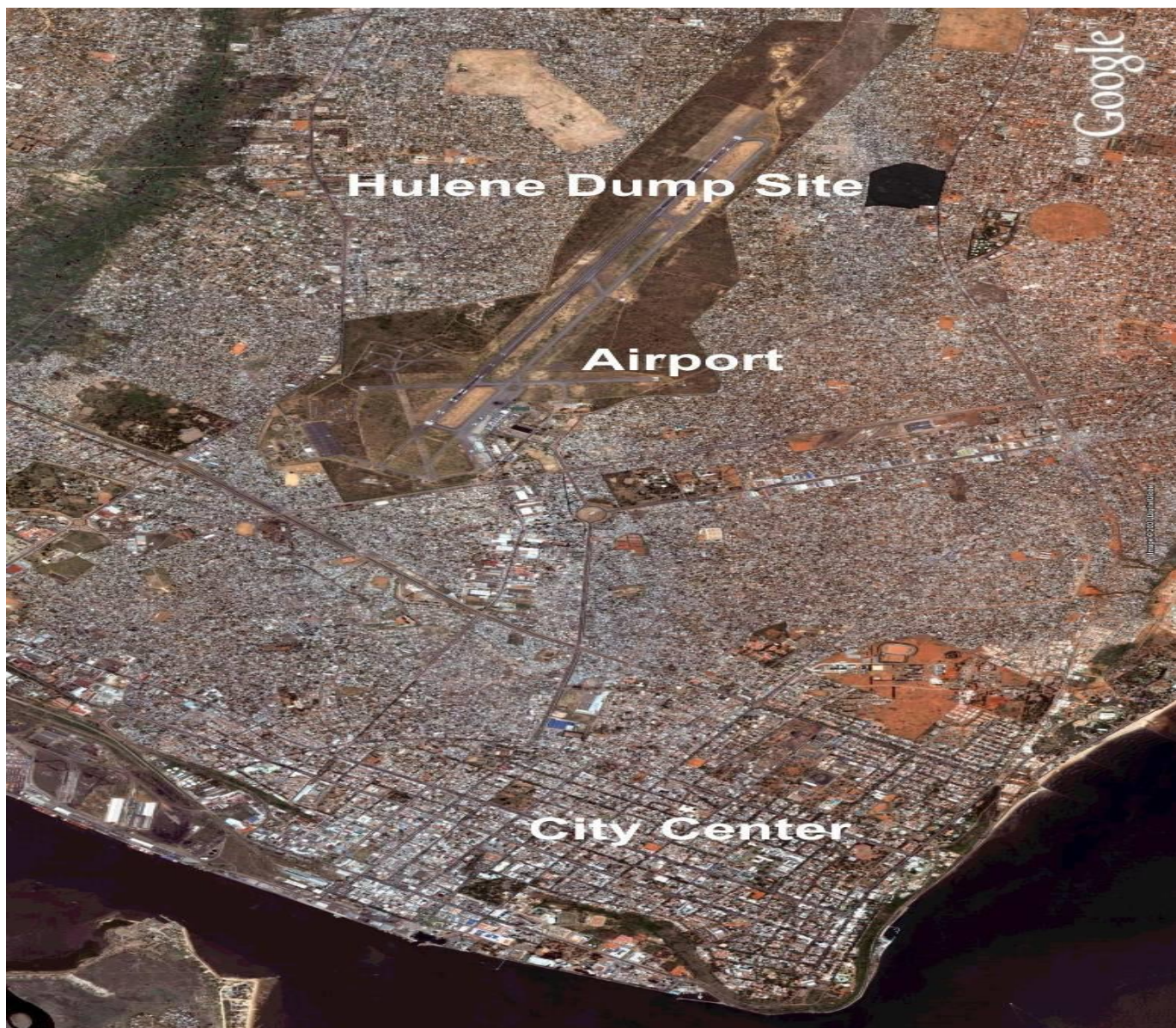
Annex: Pictures



Matola Municipal Dumpsite /one of the most critical, open burning place



Boane Municipal Dumpsite/small size dumping site



Maputo (Hulene) Dumpsite Map

This dumpsite will benefit same closure interventions/improvements with Japanese technology under the already signed agreement between Mozambican and Japanese government.

Collection Systems in peri urban areas with difficult access road



Collection Systems in peri urban areas with access road



Pilot composting initiative in Xai Xai Municipality



Private Recycling Activities in Maputo

