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## Abbreviations and Acronyms

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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AED</td>
<td>Africa Environment Day</td>
</tr>
<tr>
<td>BOD</td>
<td>Biological Oxygen Demand</td>
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<tr>
<td>CWDCC</td>
<td>Coping With Drought and Climate Change</td>
</tr>
<tr>
<td>DLDD</td>
<td>Desertification, Land Degradation and Drought</td>
</tr>
<tr>
<td>EEP</td>
<td>Environmental Education and Publicity</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>EMA</td>
<td>Environmental Management Agency</td>
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<tr>
<td>EMA (CAP 20:27)</td>
<td>Environmental Management Act (Chapter 20:27)</td>
</tr>
<tr>
<td>EMAL</td>
<td>Environmental Management Agency Laboratory</td>
</tr>
<tr>
<td>EMB</td>
<td>Environment Management Board</td>
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<td>EMS</td>
<td>Environmental Management Services</td>
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<tr>
<td>EP</td>
<td>Environmental Protection</td>
</tr>
<tr>
<td>EPM</td>
<td>Environmental Planning and Monitoring</td>
</tr>
<tr>
<td>LEAP</td>
<td>Local Environmental Action Plan</td>
</tr>
<tr>
<td>RDC</td>
<td>Rural District Council</td>
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<tr>
<td>SADCAS</td>
<td>Southern Africa Development Community Accreditation Service</td>
</tr>
<tr>
<td>UNCCD</td>
<td>United Nations Convention to Combat Desertification</td>
</tr>
<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNEP</td>
<td>United Nations Environment Programme</td>
</tr>
<tr>
<td>UNV</td>
<td>United Nations Volunteers</td>
</tr>
<tr>
<td>WED</td>
<td>World Environment Day</td>
</tr>
<tr>
<td>ZBC (TV)</td>
<td>Zimbabwe Broadcasting Corporation (Television)</td>
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Letter of Presentation

The Environmental Management Agency
685/6 Lorraine/Faber Drive
Bluffhill
Box CY 385
Causeway
Harare

The Honourable Minister of Environment, Water and Climate
12th Floor, Kaguvi Building
P Bag 7753
Causeway
Harare

Dear Madam


It is my great pleasure to present to you, Honourable Minister, the Environmental Management Agency’s 2016 Annual Report. This is in compliance with the requirements of Section (39) of The Environmental Management Act [Chapter 20:27] and Section (44) of the Audit and Exchequer Act (Chapter 22:03).

Thank you,

Ambassador Z. Nsimbi
Chairman- Environment Management Board
ENVIROMENTAL MANAGEMENT AGENCY (EMA)

BOARD MEMBERS

Ambassador Z. Nsimbi
(BOARD CHAIRPERSON)

Ms S. Nyamudeza
(VICE CHAIRPERSON)

Mr A. Mlalazi
(BOARD MEMBER)

Mr F. F Moyo
(BOARD MEMBER)

Mr N Mushangwe
(BOARD MEMBER)

Ms B. Rwodzi
(BOARD MEMBER)

Mr H. G Mazaiwana
(BOARD MEMBER)

Dr N Chanza
(BOARD MEMBER)

Mr T Mundoga
(MINISTRY REPRESENTATIVE)
2016 Management Team

**Senior Management**

Mrs D. M Chasi  
Director General

Mrs P. Shoko  
Director - Environmental Protection

Mr A. Chigona  
Director - Environmental Management Services

**Departmental Management**

Mr T. Mugugu  
Manager - Human Resources

Mrs B. Shumba  
Acting Manager - Finance and Administration

Mr C. Mushava  
Manager - EIA, Ecosystems Protection and Waste Management Manager

Mrs S. Yomisi  
Manager - Laboratory

Mr C. Matewe  
Manager - Environmental Quality

Mrs A. Nyahuye  
Manager - Environmental Planning and Monitoring

Mr S. Kangata  
Manager - Environmental Education and Publicity

**Provincial Management**

Mr B. Basera  
Manager - Harare Metropolitan

Mr M. Muusha  
Manager - Midlands

Mrs J. Mavu  
Manager - Mashonaland East

Mrs C. Mpofu-Zuze  
Manager - Matabeleland North

Mrs S. Ndlovu  
Manager - Matabeleland South

Mrs E. Mutepfa  
Manager - Mashonaland West

Mr K. Chitotombe  
Manager - Manicaland

Mr R. Rwafa  
Manager - Mashonaland Central

Mr D. Ndlovu  
Manager - Bulawayo

Mr R. Mavondo  
Manager - Masvingo
Chairman’s Statement

The Environment Management Board (EMB), that reports to the Minister of Environment, Water and Climate, is charged with giving credible and functional strategic direction to the Environmental Management Agency (EMA). The EMB gives this guidance to EMA mindful of its mandate to ensure a clean, safe and healthy environment for all citizens in Zimbabwe. Through EMA staff, the EMB fulfills this mandate through monitoring, enforcement and regulatory activities. The EMB also has the responsibility of capacitating staff through in-house training of the same and provision of resources to facilitate competent execution of tasks.

My Board put a priority tag on the issues mentioned supra because as a Board, our brief, our mandate; in other words; our total responsibility over the environment, all define our purpose for existence.

In the reporting period, we directed a lot of our effort towards local authorities after noting that the water quality of all rivers passing through urban areas was compromised due to discharge of partially treated effluent from sewer treatment plants. This resulted in water pollution that negatively impacted on the river ecosystems and on public health. We also intensified activities towards management of solid waste.

Consistent with the constitutional rights on providing a clean, safe and healthy environment, the Board ordered eight (8) local authorities to rehabilitate their waste water treatment plants. In terms of section 27 of the Environmental Management Act (Chapter 20:27), the Board summoned Harare City Council to appear before the Board to answer to six (6) charges of contravening provisions of environmental regulations.

On regulations and legal framework, the Board made five key legislative amendments which await approval by the Attorney General’s Office. The Board also toured mining sites in conjunction with the inspection of those rivers affected by mining activities.

It is during the reporting period that the Board gave a notice on the ban on kaylite. It is also in this reporting period that the Board received support from key stakeholders like churches, corporates, schools, colleges and communities for its anti-litter activities throughout the country. Other key stakeholders included Zimbabwe Republic Police, Zimbabwe Revenue Authority, Traditional leaders and the public in general. Hence the discussion to change our Motto to “Together - Protecting the Environment.” This approach was a good practice of inclusivity in essential national goals of responsible environmental stewardship.

I extend my gratitude to the Honorable Minister of Environment, Water and Climate, Honorable Oppah Muchinguri-Kashiri for her outstanding leadership and passion towards the environment. She selflessly and consistently gave quality guidance and support to the Environment Management Board. We have also received valuable and much appreciated support from the Secretary and his Ministry Staff.

I also want to thank the Director General and all EMA staff for applying themselves to their job with rare dedication. Please maintain this spirit.

The Agency upholds stakeholder participation at all times because it promotes inclusivity and brings about ownership of programmes by all.

Ambassador Zenzo Nsimbi
Environment Management Board
The “Zero Tolerance to veld fires Campaign” was launched in an endeavor to crack down on veld fire offenders. A cumulative length of 4 802.82km of fireguards were constructed in 84 old and 6 new projects under the Agency’s fire management programme. This, coupled with veld fire management education and awareness programs, resulted in a 10.4% reduction in the area burnt from 1 510 342.77ha in 2015 to 1 197 335.52ha in 2016 and a 12% reduction in fire incidences; from 2464 in 2015 to 1652 in 2016. A reduction in the deaths caused by veld fires was witnessed, from 16 in 2015 to 7 in 2016. The decrease in fire incidences was attributed to capacity building workshops on veld fire monitoring under the Monitoring for Environment and Security in Africa (MESA) SADC Thema.

According to compliance monitoring reports the country’s water quality was threatened by pollution from industries, local authorities, mining, agriculture and solid waste dumping. Furthermore, the Agency engaged communities to abate environmental degradation throughout the country which was brought about by wetland destruction, sand extraction and unsustainable agricultural practices. The Agency conducted 6 148 environmental monitoring inspections which resulted in 2 424 tickets and 830 environmental protection orders being issued for flouting environmental laws. A total of 61 418 inspections were conducted during the course of the year which were distributed as follows: water and effluent 3 542; solid waste 5 745; hazardous substances inland 3250; atmospheric pollution control 1799; environmental impact assessment 2 769; ecosystems protection 4 838; hazardous substances inspections at border posts 39 475. Furthermore, a total of 7 318 licenses were issued across all thematic areas and this translated to a 12% increase comparing with 6 555 issued in 2015.

The number of accidental spillages rose from 21 in 2015 to 22 in 2016 affecting approximately 12064m2 of land, clean-up activities were conducted to prevent contamination of underground water. In order to proactively deal with spillage incidents, the Agency trained 90 truck drivers on the management of hazardous materials during transportation. The Environmental Management Agency Laboratory continued to analyse environmental variables and developed additional 5 test methods on Total Organic Carbon, Metachlor, Chlopyriphos and Di atoms in water. My appreciation goes to all stakeholders who subscribed to our awareness and empowerment programmes that instilled environmental stewardship. The stakeholder initiated clean up campaigns, community initiated projects indicated that an eco-conscious society was towards establishment. Such initiatives gave us confidence that a clean, safe and healthy environment for all is achievable. Lastly, I thank the staff of the Agency for their unwavering dedication to duty throughout the year.

M. D. Chasi
Director General-Environmental Management Agency
The Environmental Management Agency (EMA) has a mandate of ensuring the sustainable management of natural resources, protection of the environment, prevention of pollution and environmental degradation. During the 2016 reporting period, the Agency implemented strategies which included; comprehensive environmental education and awareness, empowerment and capacity building, compliance and enforcement as well as planning and monitoring programmes in order to fulfill its mandate.

Outlined in this report are the achievements of the Agency in 2016. The preliminary section is presented first, followed by the environmental monitoring and law enforcement activities carried out to redress the major drivers of land degradation and pollution. The next segment highlights the strategies carried out to resolve environmental challenges faced by communities. These consist of; environmental education and awareness initiatives, institutional capacity strengthening, stakeholder initiated environmental projects and Local Environment Action Plans (LEAPs). Furthermore, the Human Resources Report and financial accounts certified by the Auditor General are presented. The co-operation of local, regional and international partnership programmes and activities further heightened the impact of the Agency’s annual work programme for 2016.

The drivers of land degradation were veld fires, deforestation, wetland destruction through infrastructure and housing development, sand abstraction and mining activities. The drivers of water pollution noted in the year, included the discharge of untreated or partially treated industrial effluent, raw sewage, mine drain and spillage of hazardous substance. It was established through routine ambient water monitoring from the 357 sampling points along rivers that passed through urban centres such as Dora (Mutare), Mukuvisi (Harare), Umguza (Bulawayo) and Cold Stream (Chinhoyi), were highly polluted by phosphates while those that passed through mining areas had high levels of iron, turbidity, total dissolved solids and total suspended solids. Air pollution arising from vehicle exhaust fumes, power generation from fossil fuels, veld fires, industrial emissions and solid waste burning was another environmental issue of concern.

Most urban local authorities throughout the country grappled with solid waste management. High urban population densities, rapid urbanisation, sprouting illegal settlements, expansion of residential and informal industrial areas, changing consumption patterns as well as negative public attitude compounded the challenge. Increased urban growth has not matched the necessary infrastructure and services, hence the proliferation of litter, illegal waste dumps and raw sewage challenges. This prompted government to undertake a Rapid Results Approach Initiative for Harare and later for all 32 urban local authorities.

Extensive environmental awareness and education campaigns were implemented in response to each of the above environmental challenges and issues that arose during the reporting period. The Agency worked in close partnership and co-operation with stakeholders that included: the Zimbabwe Republic Police (ZRP), Local Authorities, Government Departments, Zimbabwe Revenue Authority (ZIMRA), Zimbabwe Prison Services (ZPS), traditional leaders, civic society, private sector, communities, schools, churches and the general public. Capacity building and empowerment programmes through community projects improved environmental stewardship. Environmental law enforcement was the last resort to induce compliance to environmental laws.
Pollution Control

The major environmental challenges faced by the country in 2016 were, land, air and water pollution. These originated from poor solid waste management, discharge of raw effluent, solid waste burning and vehicle emissions. During the reporting period, there was a fire outbreak at Pomona Dumpsite in Harare which was caused by lack of care and maintenance by Harare City Council. This resulted in air pollution in the City with areas such as Pomona, Mt Pleasant Heights, Mabelreign, Avondale and Westgate being greatly affected. The Agency issued out an order outlining conditions to be followed and closely monitored the situation until it was controlled.

A total of 3542 inspections were conducted in 2016. The annual target of water and effluent discharge licenses issued was surpassed by 7%, indicating improved compliance, Figure 2.1 refers. Among the orders issued, 60% were served upon local authorities to rectify and rehabilitate sewer bursts and infrastructure. These included; Harare, Bulawayo, Gweru, Marondera, Chipinge, Mutare, Chitungwiza and Chegutu. Harare City Council was further summoned for a hearing before the Environment Management Board in terms of section 27 of the Environmental Management Act and was given conditions and time frames to control pollution which they did.

### Box 1. Water Pollution Statistics

![Water Pollution Statistics for 2016](image)

A total of 3542 inspections were conducted in 2016. The annual target of water and effluent discharge licenses issued was surpassed by 7%, indicating improved compliance, Figure 2.1 refers. Among the orders issued, 60% were served upon local authorities to rectify and rehabilitate sewer bursts and infrastructure. These included; Harare, Bulawayo, Gweru, Marondera, Chipinge, Mutare, Chitungwiza and Chegutu. Harare City Council was further summoned for a hearing before the Environment Management Board in terms of section 27 of the Environmental Management Act and was given conditions and time frames to control pollution which they did.

#### 2.1 Water Pollution Control

Water pollution monitoring is key to ensuring that water maintains its usable state. This was done through ambient water quality monitoring and licensing of all discharge points. The Agency established 357 sampling points countrywide. As a last resort, environmental offenders were prosecuted through orders, tickets and opening dockets. The main areas of focus were municipal sewer treatment facilities, mining and industrial effluent as well as other activities directly affecting the quality of water bodies.

#### 2.1.1 Inter-Ministerial Cabinet Committee on Water Pollution

An Inter-Ministerial Cabinet Committee on pollution toured sewage treatment plants in Bulawayo City, Redcliff, Kwekwe and Gweru towns (see plates 2.1 and 2.2). The tour resulted in Local Authorities drafting action plans with time frames and budget components which were presented to the Ministry of Local Government for resource mobilisation. Most local authorities had regular sewer bursts, blocked manholes and in the process discharged raw sewer into major water bodies such as Ruzawi in Marondera, Darwendale Dam in Norton, Gweru River in Gweru and Kalope stream in Hwange. This was despite Marondera and Norton having been convicted by the courts before.
Despite the challenges, it is important to note the efforts made by some local authorities in order to improve the situation. Kwekwe City Council’s Biological Nutrient Removal (BNR) plant was operationalised following rehabilitation works and received 95% of its sewage from 3 offsite pump stations, namely Amaveni, Woodlands and Mbizo 10. The 5% difference of sewage generated was treated using conventional septic tanks which were emptied using two modern honey suckers.

In Bulawayo, rehabilitation at Aisleby 3 was completed and the plant was commissioned on 12 August 2016. The BNR plant underwent modifications which included installation of a real-time effluent quality monitoring system. Efforts were made to replace sewer pipelines along Birkenhead Road an area prone to occasional bursts, Plate 2.3 refers.

2.1.2 Mining and Industrial Inspections

Results from monitoring the environmental impacts of effluent discharge by mining and industrial operations revealed that most entities were polluting the environment in various ways.

ZIMASCO in Kwekwe was ordered to cease operations in May because of their slag dump which contained 1-4% chromium concentration was being placed on unlined surface causing underground water pollution through seepage of chromium VI containing leachate, plate 2.4 refers. Furthermore, effluent containing Chromium VI was generated at the investigations in and around the site revealed high levels of chromium which were above the World Health Organization (WHO) guideline of 0.05mg/l with values of 0.49mg/l and 0.29mg/l respectively. Follow up inspections that were conducted revealed that the company had complied with the provisions of the order. Progressive installation of pollution abatement measures was done. This included the lining of the new slag dumping area, effluent canals as well as the slimes dam effluent return ponds. Refer to plates 2.4 and 2.5.
Plate 2.4: Slag dump on an unlined surface at ZIMASCO Kwekwe 16/5/16

Plate 2.5: Lining of new slag storage site ZIMASCO Kwekwe 4/08/16

Plate 2.6: Lining of effluent return pond at following EMA intervention at ZIMASCO Kwekwe 4/08/16

Plate 2.7: Unlined return pond containing waste water with a chromium (VI) concentration of 65.72mg/l 17/5/16

Plate 2.8: Effluent containing Chromium (VI) escaping from the AFS plant into an unlined trench 17/5/16

Plate 2.9: Effluent containing Chromium (VI) escaping from the AFS plant into a lined trench 17/5/16
The Kadoma Textiles plant discharged its effluent into ponds through unlined canals. The company was served with an environmental Protection Order to line the effluent canals and pretreat effluent before discharge. Plate 2.10 refers. The company cleared one of its ponds and lined it in compliance with the order provisions.

The Cold Storage Commission in Bulawayo was ordered to stop discharging untreated effluent into a storm drain which led to Matsheumhlope River. Plate 2.11 refers. This followed a breakdown of a sewer line (Birkenhead Road sewer line) which was under repair. Furthermore, the company was ordered to rehabilitate its effluent pre-treatment plant in order to treat the effluent to permissible levels in terms of the Statutory Instrument 6 of 2007 on affluent and solid waste management.

2.1.3 Bio-monitoring

The Agency embarked on a programme to monitor the impacts of pollution on riverine ecology by rolling out a bio-monitoring programme. The programme was launched in three (3) provinces namely Manicaland, Mashonaland Central and Mashonaland West with the initial efforts targeting the reassessment of the suitability of identified sites to act as points of reference. Out of the identified thirty one (31) sites, twenty seven (27) were inspected of which 23 were sampled with the remaining four (4) sites ruled off because they were dry.
2.2 Air Pollution Control

A total of 1799 air emissions inspections were carried out countrywide with 546 inspections having been on vehicles emissions. Forty nine (49) tickets were issued for various offences such as the discharge of emissions without a valid license while 20 orders were issued for corrective action to be taken. Two thousand four hundred and three (2403) licence applications were received and processed during the year, a 14.5% increase from the 2098 issued in 2015, see Figure 2.2.

![Plate 2.12: Biological sampling along Haroni River in Chimanimani (3/06/16)](image1)

![Plate 2.13: EMA officers conducting onsite water quality chemical tests at a point along Muraro River in Nyanga National Park (9/06/16)](image2)

**Figure 2.2: Emission licences issued by EMA 2013-2016**

<table>
<thead>
<tr>
<th>Year</th>
<th>Blue</th>
<th>Green</th>
<th>Yellow</th>
<th>Red</th>
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<td>1088</td>
<td>47</td>
<td>71</td>
<td>35</td>
</tr>
<tr>
<td>2014</td>
<td>1308</td>
<td>68</td>
<td>102</td>
<td>30</td>
</tr>
<tr>
<td>2015</td>
<td>1852</td>
<td>151</td>
<td>69</td>
<td>26</td>
</tr>
<tr>
<td>2016</td>
<td>2204</td>
<td>128</td>
<td>78</td>
<td>15</td>
</tr>
</tbody>
</table>
2.2.1 Incinerators

Inspections of incinerators at medical institutions in the country’s 10 provinces were conducted during the period under review. Eighty (80) percent of the 70 incinerators inspected were found to be compliant with discharge standards. The non-compliant remainder were issued with orders for repairs to be effected, see Figure 2.3.

The non-compliant incinerators were largely operated by public institutions and non-compliance cited was attributed to lack of funding. However other institutions such as Marondera Hospital were observed to have been taking steps towards the rehabilitation of their incinerators, plate 2.14 refers.
2.2.2 Air pollution monitoring in Kwekwe
Ferro alloy smelting emissions have a significant impact on ambient air quality. In an effort to determine the level of risk posed by these emissions, the Agency conducted a snap survey on ambient air quality in Kwekwe in the month of October. Particulate matter (PM10) was monitored at three points and the readings were in the range of 2.2-2.6mg/m3. These levels fall in the green band of Statutory Instrument 72 of 2009 on Air Pollution Regulations indicating a low risk to ecological processes.

2.2.3 Vehicle emissions inspections
The transport sector is emerging as a significant source of air pollution owing to a marked increase in the country’s vehicle population. It is further compounded by the fact that most imports are largely constituted by second hand vehicles. In an effort to manage emissions from the transport sector, 6 road blocks were conducted resulting in the inspection of 992 vehicles, see Plate 2.15.

Three hundred and eight three (383) vehicles were noted to be emitting above the legal limits and were issued with tickets. This amounts to a compliance rate of approximately 61%, a drop from the 85% and 81% compliance levels noted in 2014 and 2015 respectively.

2.3 Land Pollution
2.3.1 Solid Waste Management
Solid Waste Management remained a challenge in Zimbabwe. Improper solid waste management by local authorities prevailed in 2016 resulting in land and water pollution through littering, illegal dumping which resulted in the clogging of storm water drains. The peak of the challenge was the fire outbreak at Harare’s Pomona dumpsite which went on for three weeks causing massive air pollution. Prior to the dumpsite fire outbreak, the City of Harare had appeared before the Environment Management Board on six counts including the lack of care and maintenance of Pomona dumpsite.

2.3.1.1 Drivers of Land Pollution
The major drivers of land pollution were improper solid waste management due to a mismatch between waste generation and management, unsustainable consumption patterns, illegal settlements and negative attitudes from the public and corporates.
2.3.1.2 Response to Poor Solid Waste Management

A total of 35 orders were issued by the Agency to local authorities, and 25 of them complied resulting in the clearance of 597 illegal solid waste dumps by local authorities, in Harare, Chitungwiza, Marondera, Bulawayo and Gweru. However, it is important to note that dumps continued to resurface in cleared areas and measures were put in place to ensure sustainability of the clearing and non-recurrence of the dumps. Plate 2.17 shows one of the dump sites which were cleared.

The Agency engaged public service vehicle operators through the issuance of 303 orders to put in place waste receptacles in their vehicles. As a follow-up on this initiative, the Agency in partnership with the Zimbabwe Republic Police intensified anti-littering campaigns and roadblocks resulting in the prosecution of 988 litterbugs nationwide. A total of 946 public passenger vehicles were inspected for bins and the compliance level was 90%.

The Agency noted active participation of stakeholders such as churches, schools, colleges and industrial clusters in clean up campaigns. This resulted in 1715 stakeholder initiated clean up campaigns. Furthermore, 56 Community Based Organisations (CBOs) mobilised during the period under review collected waste for recycling projects.

The Honourable Minister of Environment, Water and Climate took waste management issues to the public domain, Plate 2.20 refers. The Honourable Minister undertook an Antilitter Campaign where she addressed motorists, providing them with awareness material at a roadblock mounted by the Agency together with ZRP along Samora Michel road as well as visiting Road Port and Fourth street bus termini.

2.3.1.4 Waste Management Survey

Waste management surveys were conducted in Harare, Mutare and Chinhoyi. The surveys focused on residential and commercial areas and established the quantities of waste produced per household or commercial entity and the composition of the waste. The units of analysis were the household and commercial entities' bins and cages at the commercial centres. A total of 448 households sampled in Harare's residential areas accumulated an estimated 4,1 tonnes of waste per week in the proportions indicated in figure 2.5. Figure 2.4 shows the comparison between the amount of waste generated by individual households in the high, medium and low densities in 2011 and 2016.

According to the Waste Characterisation Study carried out in 2011, the high density suburbs contributed the highest amount of waste and the low density areas the least weight. This pattern still holds mainly because in high density areas there is high prevalence of waste burning, burying and dumping due to erratic waste collection as such these results were biased. Data for the low and medium density areas was closer to the true representation of waste generated because all waste generated is placed in the bin because the local authority adhered to its collection schedule.
Food waste constituted the most common waste stream, 62%; recyclables 20% and diapers contributed 11% by weight. The waste was characterized into 12 major classes and highlighted in the figure 2.5.

Focusing on data for the Low and Medium density areas, there was a 34.5% reduction in the average waste generated per household from 1.889 in 2011 to 1.237 in 2016. However, due to an increase in the number of households established over time, the cumulative total of waste generated in Harare’s residential areas had increased from 210 605 tonnes/year to 268 287 tonnes/year.

2.3.1.5 Tavatose/Sisonke Visual Art Competition

The 2016 Tavatose/Sisonke Schools Visual Art Exhibition was officially opened on the 19th of July at the National Gallery of Zimbabwe under the theme “Waste no Waste-Waste is Treasure”. A total of three hundred and ninety eight [398] schools drawn from all the provinces participated in the competition. School pupils from pre-school to high school who excelled in designing two and three dimensional artworks which responded to the theme received prizes.
2.3.1.6 Environmental Debates

The 2016 National Schools debate competitions were held and 750 secondary schools and 9,124 students participated from district, up to the national finals. The debate topic for 2016 was ‘Environmental Prosecution and Not Environmental Education, Is the Best Way to Deal with Poor Waste Management Practices in Zimbabwe’. The competition was co-financed by EMA and UNICEF. The Winner for the affirmative side was Mutare Boys High School from Manicaland whilst for the non-affirmative side was Regina Mundi High School from the Midlands Province.

2.3.2 Hazardous Substances Monitoring and Control

The management of hazardous substances globally and regionally is governed by the multilateral environmental agreements. However, Zimbabwe domesticated the provisions of these and has its own regulations to govern the same. The Agency monitors the manufacturing, importation, transportation, storage, sale and use of hazardous substances as well as the hazardous waste from industrial processes in order to minimise exposure of people and the environment to the toxic effects of such substances.

The Agency conducted 42,725 inspections during the year and this resulted in the issuance of 691 tickets and 72 environmental protection orders.

2.3.2.1 Border Post Monitoring

The Agency carried out 39,475 hazardous substances transportation monitoring checks at the six main ports of entry namely Beitbridge, Forbes, Victoria Falls, Nyamapanda, Plumtree and Chirundu. The majority (43%) of the substances inspected were in the green class and 10% in the red class.

2.3.2.2 Industrial Monitoring

A total of 3,250 inland hazardous substance inspections were conducted during the year. The section below gives a summary of the key findings made during the inspections.

2.3.2.2.1 Wordcroft

During the monitoring inspections, a Wordcroft tanker had a petrol leak along Hofmeyer Street in Masvingo. It was ordered to immediately offload the petrol as it was exposing the public to fire hazards, see Plate 2.25. Regular environmental inspections allowed the Agency to quickly avert potential environmental challenges.

2.3.2.2.2 Illegal Fuel Vending

Illegal fuel vending was a challenge in the southern parts of the country, especially in Bulawayo, Beitbridge and Plumtree. Joint fuel operation raids with state organs such as ZRP, ZIMRA, and Beitbridge Town Council were conducted at Plumtree Border post, Mbalabala, Mzingwane and Beitbridge, see Plate 2.26. A total of 2,675 litres of fuel comprising of 800 litres of petrol and 1,875 litres of diesel were confiscated and released after paying fines for storage and sale of hazardous substances.
2.3.2.2.3 Hwange Coal Gasification

Hwange Coal Gasification plant was issued with an order to pave their stock yard. This was a preventative mechanism to avoid washing away of fine coal into the environment with agents like running water. Furthermore, they were ordered to rehabilitate the area affected by the deposition of the coal fines outside the plant premises, see Plate 2.25.

2.3.2.2.4 Accidental Spillages

Twenty three (23) accidental spillages were recorded during the year. The spillages resulted in the contamination of approximately 12064 m² of land. All the spillages reported were attended to and clean ups done under strict supervision of the Agency. The Agency conducted 4 training sessions with an enrolment of 60 truck drivers in order to capacitate truck drivers to manage spillage incidents. The training focused on the management of hazardous substances during transportation.

2.3.2.2.5 Diesel Spillage, Mutare

Plates 2.26 and 2.27 show the spillage of Diesel that occurred in Manicaland and the cleanup thereof.
3.0 Prevention of Land Degradation

The major drivers of land degradation were sand and clay abstraction, deforestation, wetland ecosystems destruction, veld fires and mining.

In a bid to reduce the number of prescribed projects being implemented in contravention of the environmental management regulations on Environmental Impact Assessments and Ecosystems Protection, the Agency conducted a total of 7,607 inspections, and 1,082 environmental audits targeting small, medium and large scale operations. As a result, 235 tickets were issued to offenders for environmental degradation offences.

A total of 312 environmental protection orders were served for the mitigation of negative environmental impacts causing degradation in an endeavor to protect the environment from continuous exposure to pollution. A total of 583 prospectuses were submitted as compared to the previous year which had 625.

All prospectuses were responded to within 5 days of submission. During the year; 601 EIA licences were issued to various projects. The section below details key findings that were noted during monitoring activities.

3.1 Mining

Intensive unsustainable mining activities resulted in unprecedented land degradation, land cover and ecosystem changes. The Agency however, through its monitoring inspections, managed to control some of the environmental ills caused by the mining sector.

3.1.1 Alluvial Mining

Alluvial mining is prohibited by Statutory Instrument 92 of 2014 (Environmental Management Control of Alluvial Mining Regulations. Two mines namely; Ayerum 30/34 and D-Troop Gold Mine, were served with orders to stop operating within 200 metres of the highest flood levels of nearby streams and rivers and they complied.

Similarly, a docket was opened for Riverblock Mine on 18 May 2016 for the outlawed alluvial mining along Umzingwane River: Equipment used for mining operations which included a compressor, three water pumps and diesel were confiscated and handed over to the police, see Plate 3.1. and 3.2.

3.1.2 Gache Kache Project

The Zimbabwe Consolidated Diamond Company (ZCDC) was established by the government of Zimbabwe in an attempt to boost production, profitability and sustainability while achieving better accountability and transparency in the mining sector. The company was set to carry out alluvial mining and processing of gold, Platinum Group Metals (PGMs) and other heavy minerals on Gache Kache River in Kariba, Mashonaland West Province. However, ZCDC abruptly ceased the project during the reporting period.
3.1.3 Artisanal Mining

Environmental degradation as a result of artisanal mining was rampant in Mashonaland West, Mashonaland Central, Matabeleland South and Midlands Provinces. Gold is the most sought after mineral with tantalite, emerald, chrome, clay and sand also being illegally mined in some parts of the country. Sites mapped in Mberengwa District included CSC and Neta area as well as Mhondongori in Zvishavane District where environmental degradation resulted from chrome mining pits that were left unrehabilitated. The areas were strewn with numerous pits that were a danger to animals and people. Inspections conducted at C-Mine resulted in mapping of approximately 15 ha of land affected by illegal gold panning activities. Illegal chrome mining was also observed to be on the increase in Gaths Mine area of Masvingo District. The total area affected by the chrome mining activities at Icon Alloys measures approximately 20 ha, see Plate 3.4.

3.1.4 Improved Environmental Management after EMA intervention

The Agency employed strategies to ensure that mining companies minimized environmental harm caused by their operations. An example was Vumbachikwe Mine in Matabeleland South Province which greatly improved its environmental compliance and implementation of sound environmental management systems. The mine was served with orders in October 2013 to abate dust. In response to this, a water sprinkling mechanism was installed to suppress dust on the loading and offloading bays, see Plate 3.7. The Jaw crushers have a water spray to reduce dust. The mine installed the dust bagging system to control the air emissions from its processes. Return system of water from the dumps was available and fully functional. Underground water monitoring was done through boreholes which have been sunk.
3.2 Deforestation

Deforestation continued to be a major environmental issue in the country due to firewood demand in urban areas and tobacco curing by the resettled farmers. Joint operations were done in conjunction with ZRP, Forestry Commission and local authorities in various districts in which 166m³ of indigenous firewood was confiscated, see Plate 3.8. Raids on illegal firewood trading were conducted along Zaka road in Masvingo. Plate 3.8 refers. The confiscated wood was sent to Chiredzi RDC under a disposal order to state institutions.

3.3 Veld Fires

A total of 1202 inspections were conducted nationally resulting in issuance of 1200 orders for fire pre-suppression measures preparations. This initiative resulted in the clearance of road servitudes along the Plumtree-Bulawayo-Harare-Mutare and Makuti – Kariba Roads.

The National Fire Launch was conducted in Seke District at Nyambire Primary School on the 16th of June 2016. The Launch was graced by the Minister of Environment Water and Climate, the President of the Chiefs’ Council, Chief Charumbira, ...
and 18 Chiefs from various provinces across the country. In addition, a total of 92 other events were held at ward, district and provincial levels in the 8 rural provinces of the country under the theme, “Veld Fire Prevention–My Responsibility” and a combined attendance of 61 533 people was recorded at these events. As a build-up to the national fire launch, awareness campaigns in the form of road shows (328), school talk shows (461) and farm community meetings (149) and 246 indabas were held countrywide.

The 2016 fire season recorded a total of 1 652 incidences resulting in 1 197 335.52ha of land being destroyed by fire while 1 881 incidences and 1 336 746.77ha were burnt in the 2015 fire season. This translated to 10.4% reduction in the area destroyed by veld fires and a 12% reduction in fire incidences. In addition, property worth US$241,569 was destroyed and seven (7) lives were lost to veld fires compared to sixteen (16) in 2015.

3.5 Control of Spread of Invasive Alien Species

3.5.1 Lantana Camara Eradication

Lantana Camara is a terrestrial invasive alien species that replaces the native vegetation if left uncontrolled. A total of 215.2 ha of land infested with Lantana Camara was cleared in 24 districts namely Zaka, Gutu, Masvingo, Bikita, Gwanda, Beitbridge, Murehwa, Mangwe, Umzingwane, Chivi, Mwenezi, Chimanimani, Chiredzi, Buhera, Chipinge, Mutoko, Bindura, Seke, Bubi, Murehwa, Chikomba, Goromonzi, Hwedza, Bubi and Nkayi. A total of 20 projects were carried out under the Food for Work Programme while the Agency established and funded 4 projects. The clearing of Lantana Camara opened up arable land and pastures for communities.

3.6 Wetlands

In rural areas, agriculture and brick moulding were the main activities which are affecting wetlands whilst in urban areas wetlands were threatened mainly by agriculture, housing and commercial developments. A total of 154 inspections were conducted on wetlands across the country resulting in issuance of 8 tickets for illegal wetland utilization and stream bank cultivation. Eight (8) orders were issued for illegally utilising ecologically sensitive ecosystems which resulted in reduced degradation, see Plate 3.12.
3.6.1 Wetland Protection

The Agency supported 8 wetland protection projects during the year. The main objectives of the projects were to protect wetlands and improve their biodiversity while supporting community livelihoods. In Nyanga District, the Agency established a wetland protection project, Nyamuenda Wetland Project and engaged Africa University which capacitated communities on the implementation of the project. The project had two components, wetland protection and fish farming and benefited 24 households. At the onset of the project, the Agency provided fingerlings and feed enough for five ponds but with time the communities nurtured the fish and spread them over 25 ponds to ensure each household owned a pond and significantly benefitted from the project. The community started harvesting for consumption and sale in October and each member harvested 10 fish of 250-500 grammes.

Jedza Wetland Project implemented in Murehwa protected 4 hectare which was under threat from brick moulding activities, cultivation as well as lantana camara invasion. The wetland supported 76 direct beneficiaries who harvested water for horticultural projects and livestock watering outside the wetland.

3.6.2 Wetland Ecological Assessments

A total of 31 wetlands were assessed during the year which included 27 proposals for infrastructure development projects in Harare. These included Lot 13 Glen Forest, Sunway City Samsung Project, Stand 8393 Warren Park, Eastlea Wetland, Subdivision of Stand 119, Ruwa Township, stand 40292 Belvedere, Saturday Retreat (Southway Manors), Vee Housing Development Project among others. The Agency recommended that all the proposed sites be left in their natural state as they were purely wetlands. In addition, all the assessed wetlands were disturbed by human activity through cultivation and waste dumping. Figure 2.6 shows the wetland characteristics of a proposed project in Budiriro.

In Matabeleland South Province, a baseline survey on species diversity and the extent of degradation was conducted on Ntunjambili and Ngwabi wetlands in Ward 15 of Matobo District. Matobo District is the only wet district in the province and as such its wetlands are of significant importance. Both wetlands were found to be extensively degraded because of human activities and livestock grazing. Environmental Management Plans were developed for two areas to allow the restoration of the wetlands.
During the year, the laboratory received 9,672 samples for chemical and microbiological analysis. Internal samples contributed 8,273 whilst external clients had 1,399 samples. Drinking water surveillance for bottled water and boreholes was done. Thirteen (13) samples for bottled water, twelve (12) borehole water samples from Harare high density areas and thirty-nine (39) communal boreholes were sampled and analysed. The laboratory worked on a pesticides analysis project and soil analysis project expansion.

4.1 Training
In an effort to strengthen the EMA Laboratory’s emergency preparedness plan, laboratory staff were trained in firefighting by City of Harare Fire Brigade. The use of all types of fire extinguishers was practically demonstrated. Four staff members were trained on Occupational Health and Safety Management Systems (OHSAS), 18001.

4.2 Drinking Water Surveillance
Sampling of underground drinking water was done in some of Harare’s high density suburbs and the results indicated the presence of faecal coliforms in boreholes in Kambuzuma 4, Warren Park D and Southlea Park. Faecal coliforms were found in water from deep wells used by residents of Southlea Park and Hopley Farm. The presence of faecal coliforms is indicative of faecal contamination and the potential presence of pathogens. These pathogens cause water borne diseases such as typhoid, cholera and diarrhoea.

Chemical analysis of Harare high density suburb boreholes indicated that seven boreholes met the SAZ drinking water standards except for 5 boreholes which had turbidity above the recommended limit of 5NTU. These were Kamunhu Centre Mabvuku, Epworth Solani, Kuwadzana 1 Primary, Old Tafara Foundation College and Epworth Overspill. Microbiological analysis for Warren Park Poly Clinic, Kambuzuma 4 and Mufakose samples had total coliform contamination which is above the expected zero/ml counts according to SAZ drinking standards. The presence of coliforms indicate the possible contamination of water by pathogens (disease causing microorganisms). The relevant Ministry and Harare City Council were notified of these findings.

4.3 Umguza Pollution Investigations
Water samples were taken from the Umguza area to monitor pollution emanating from leakages in the sewer outfalls in Bulawayo. The parameters that were relatively high on the sampling points were phosphates, electrical conductivity, chemical oxygen demand, and turbidity. Chloride, alkalinity and total suspended solids were high only on selected points. In all water samples tested, chromium hexavalent was within recommended limits according to the SI 6 of 2007 on Effluent and Solid Waste Management Regulations. Three river water samples (Makatini Umguza, Umguza River and lower Umguza outlet), two wells (Ncube and Randall Farm) and one borehole had faecal contamination.

Heavy metals were detected in the cabbages, fodder, tomatoes, maize and sugar cane. However, the results obtained were below limits stated in Food and Food Standards (Food Additives and Prohibited Substances) regulations, Statutory Instrument 136 of 2001.

4.4 City Council Sewage and Water Treatment Plants
The quality of effluent and water from 10 provincial capital sewage works and water treatment plants was analysed. The intention was to assess the effectiveness of the treatment of waste water by sewage works before discharge into the environment and the effectiveness of drinking water treatment plants and the quality of water distributed to residents.

Out of the ten, only Mutare’s Gimboke waste water treatment plant was functioning effectively as it reduced all parameters to be within acceptable range. The parameters of concern in all inlet sewer treatment plants were chemical oxygen demand, dissolved oxygen, permanganate value, phosphate, turbidity and total suspended solids.
4.5 Projects
The Environmental Management Agency Laboratory (EMAL) conducted a number of projects to ensure sustainability, credibility and efficiency.

4.5.1 Laboratory Expansion
The Agency worked on laboratory expansion in soil and air pollution as well as pesticides analysis. New equipment, the Thermal Desorption Unit, coupled with the Gas Chromatography Mass Spectrophotometer allowed for analysis of air samples. The Gas Chromatography Mass Spectrophotometer which is used for pesticides and hydrocarbons analysis is for quantifying the amounts of pesticides that could be present in water, fruits and vegetables. The EMA Laboratory developed methods for the analysis of Total Organic Carbon, Metachlor, Chlopyriphos and Di atoms in water.

4.6 Laboratory Accreditation
The laboratory had the 5th surveillance assessment visit by the Southern Africa Development Community Accreditation Service (SADCAS) in August 2016. The laboratory was recommended for continued accreditation and scope of extension on turbidity and chemical oxygen demand. The laboratory also received 6 chemical samples from the Southern African Development Community Cooperation in Measurement Traceability Proficiency Testing (SADCMET PT) Namwater, Namibia, to assess its competency at regional level. A total of 19 countries participated in this scheme.
Environmental Law Strengthening

This Section covers all activities and actions taken throughout the year towards strengthening of legislation.

5.1 Strengthened Legal Framework

The principle act, the Environmental Management Act Chapter 20:27 draft amendments were done and awaiting gazetting. Furthermore, the hazardous substances and Environmental Impact Assessment regulations had provisions amended to suit emerging issues. New regulations of Electronic-Waste, beverage container deposit and levy regulations were drafted. The wetlands declaration was sent for gazetting after inclusion of the Universal Transboundary System.
Various activities were carried out during the year to increase accessibility, availability and dissemination of environmental information. These included educational awareness meetings, workshops, exhibitions, environmental competitions, training of stakeholders, road shows, television and radio programmes and production of environmental literature.

### 6.1 Commissions

The Agency commemorated seven (7) environmental observance days namely; World Wetlands Day (WWD), Africa Environment Day (AED), National Fire week, World Day to Combat Desertification, World Environment Day, Clean Up Zimbabwe Campaign and National Tree Planting Day. A total of 156 events were held countrywide, reaching out to 107 465 people, spreading environmental information on various issues such as sustainable wetland management, fire management, waste management and water pollution to various stakeholders, Table 6.1 refers. This resulted in a well-informed society with sound environmental management practices.

<table>
<thead>
<tr>
<th>Commemoration</th>
<th>Theme</th>
<th>Number of events held</th>
<th>People Reached</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Wetlands Day</td>
<td>Wetlands for our future- Join us; sustainable livelihoods</td>
<td>10</td>
<td>13 450</td>
</tr>
<tr>
<td>Africa Environment Day</td>
<td>Empowering Communities for Sustainable Natural Resources Management”</td>
<td>13</td>
<td>920</td>
</tr>
<tr>
<td>National Fire Week Launch</td>
<td>Zero tolerance to veld fires</td>
<td>92</td>
<td>61 533</td>
</tr>
<tr>
<td>World Environment Day</td>
<td>Go Wild for Life- Save the Environment</td>
<td>11</td>
<td>6320</td>
</tr>
<tr>
<td>World Day to Combat Desertification</td>
<td>Inclusive cooperation for achieving Land Degradation Neutrality</td>
<td>10</td>
<td>5000</td>
</tr>
<tr>
<td>Clean Up Zimbabwe Campaign</td>
<td>A clean city – my responsibility</td>
<td>10</td>
<td>13 450</td>
</tr>
<tr>
<td>National Tree Planting Day</td>
<td>Trees for Nutrition and Growth</td>
<td>10</td>
<td>6792</td>
</tr>
<tr>
<td>Total reached</td>
<td></td>
<td>156</td>
<td>107 465</td>
</tr>
</tbody>
</table>

Plate 6.1: World Wetlands Day Commemorations in Budiriro 3, Harare; 05/2/16 and Chirumba High School Bikita district, 03/06/16, respectively.
6.2 Environmental Exhibitions Held

The Agency participated at eighty two (82) exhibitions and reached out to 78 202 people during the period under review. These exhibitions included; the Zimbabwe International Trade Fair, Mine Entra, Agricultural Shows, Career Guidance Exhibitions, Telone Wellness Fair, Youth Expo and Sanganai Tourism Expo. The exhibitions enhanced the interface between EMA and various stakeholders such as miners, churches, schools and farmers, table 6.2 refers. Participants who passed through the Agency’s stand at all the exhibitions got an opportunity to seek clarity on various environmental issues. Publicity and promotional material were distributed to the public during these exhibitions.

Exhibitions provided a platform for the Agency to interface with its stakeholders. This allowed the Agency to tailor make programmes and projects to suit stakeholders’ expectations.

### Table 6.2: Number of Exhibitions

<table>
<thead>
<tr>
<th>Exhibition</th>
<th>Number</th>
<th>People Reached</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Zimbabwe International Trade Fair</strong></td>
<td>1</td>
<td>7 678</td>
<td>The Agency exhibited at the Zimbabwe International Trade Fair (ZITF) that was held from 26th of April to the 30th of April 2016. The ZITF theme was “Innovate, Integrate, Industrialize – Optimizing assets to obtain economic value” whilst the Agency exhibited under the theme, “Creative and sustainable use of the environment to obtain economic value.” The exhibition models at display covered several thematic areas that included solid waste management, Environmental Management Agency Laboratory (EMAL) and veld fire management.</td>
</tr>
<tr>
<td><strong>Mine Entra</strong></td>
<td>1</td>
<td>784</td>
<td>The theme for the year was, “Unearthing Opportunities” and the Agency exhibited under the theme, “Unearthing Opportunities – Promoting Sustainable Environmental Practices”. The Agency raised awareness on the need for all Mining, Engineering and Transportation Entrepreneurs to regularize their operations in compliance with the Environmental Management Act (CAP 20:27) and its ancillary regulations.</td>
</tr>
<tr>
<td><strong>Agricultural Shows</strong></td>
<td>59</td>
<td>59945</td>
<td>The exhibitions held throughout the country focused on thematic areas such as veld fires, waste management, and wetlands management among other priority areas. The apex of the Agriculture shows held by all the provinces was the Harare Agriculture Show which was exhibited under the theme: “CLIMATE RESILIENCE THE NEW ENVIRONMENTAL FRONTIER”. The show theme was made in a way that enabled the Agency to demonstrate to visitors what the organization was doing in creating a climate resilient nation.</td>
</tr>
<tr>
<td><strong>Youth Expo</strong></td>
<td>1</td>
<td>2500</td>
<td>The youth expo provided opportunity to the youths to appreciate the importance of conserving natural resources.</td>
</tr>
<tr>
<td><strong>Careers days</strong></td>
<td>20</td>
<td>7295</td>
<td>The Agency raised awareness to school children and teachers on topical environmental issues as well as employment opportunities in EMA.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>82</td>
<td>78 202</td>
<td></td>
</tr>
</tbody>
</table>

6.3 Environmental Competitions

During the period under review, the Agency supported 4 environmental competitions namely; Environmental Debates, School Projects Competition, Tavatose/Sisonke Visual Art Exhibition and the Environment Management Board Competition for Agriculture colleges.
6.3.1 National Schools Environmental Projects Competition

A total of 1386 schools that participated in the environmental schools projects competition undertook various projects which included waste management, gully reclamation, nutritional gardens, wetland management and tree planting. The competition is held every year with the aim of fostering environmental stewardship among the youths.

The competition equipped students with environmental knowledge and skills that motivated them to initiate environmental conservation projects in their localities.

6.4 Awareness Programmes in Schools

The Agency raised awareness in schools through platforms such as talk shows and environmental clubs. The objective of these activities was to create an eco-conscious society amongst the young generation.

6.4.1 School Talk Shows

A total of 1343 environmental talk shows were held throughout the country and attended by 188 459 pupils. The talk shows focused on all environmental issues namely: wetlands management, fire management, land degradation, deforestation and waste management.

6.4.2 Environmental School Clubs

A total of 580 new environmental school clubs were registered and supported in all the provinces this year giving a total of 2100 school environmental clubs. The clubs created a platform where school children share environmental knowledge with the Agency providing technical support, environmental literature and waste receptacles. Clubs have made it possible for students to understand the sustainable management discourse and how they should be involved.
6.5 Road Shows
A total of 1229 road shows were conducted in all the provinces attracting an audience of 479 722. The road shows raised awareness to the public on topical environmental issues such as; wetlands protection, veld fire management, waste management, hazardous substances management, land degradation, stream bank cultivation and environmental impact assessment. In urban areas, anti-littering road show campaigns targeted the public and commuter omnibus operators. The road shows were both fun and professional, pushing the EMA brand to the reachable and marginal areas. These were coupled with giveaways to the audience in the form of; t-shirts, bandanas, lanyards, key rings, brochures, booklets and folders.

6.6 Mobile Awareness
A total of 964 mobile awareness campaigns were held throughout the country during the period under review, with a total outreach of 600 000 people. The mobile awareness campaigns were conducted to inform the public on the need to keep their environs clean. Some of the awareness campaigns were part of the Clean-up the World Campaign exercise from the 1st to the 30th of September 2016 aimed at improving the country’s solid waste management status throughout the country; Plate 6.12 refers.

6.7 Antilitter Activities

6.7.1 Waste Management Roadblock Awareness Campaigns
A total of forty two [42] anti-litter roadblock awareness campaigns were held in Harare, Bulawayo, Mutare, Gweru, Masvingo, Bindura and Beit-bridge. The campaigns reached out to a total of 8280 motorists and 1038 “No Littering” awareness materials were distributed to public service vehicles. The Minister of Environment, Water and Climate Hon. O. C. Z. Muchinguri spearheaded the Mutare road campaign; Plate 6.6 refers.

The Agency distributed antilitter stickers for vehicles and these were stuck on 130 school buses, 1 038 public service vehicles, 350 private vehicles, 31 bus companies which had 3,190 anti-litter stickers stuck on their vehicles. In Harare, 200 stickers were distributed to the public by the Minister of Environment, Water and Climate at Road port. This was done to raise awareness on littering to passengers and hence reduce the impacts of littering along roads and on highways. At least 90% of public service vehicles in the country had bins for passengers to dispose litter. This has been necessitated mostly by awareness programmes through road blocks.

6.7.2 Clean-up campaigns
A total of 1 751 stakeholder initiated clean-up campaigns were done countrywide. The Agency availed cleaning material such as latex gloves, bin liners, face masks, pokers and brooms. The clean up campaigns were organized by churches, schools, corporates and community-based organisations such as Miracle Missions. Below are some of the advertisements of clean-up campaigns posted by stakeholders.
Corporates and church organisations supported waste management programmes through the adoption of streets and parks and donation of bins. A total of 3800 bins were donated to some local authorities with Hwange receiving 1000 bins, Harare 1002 by Econet and Mutare 100 bins. Delta Corporation installed 200 cages at shopping centers in Harare, Gweru, Mutare and Bulawayo as collection points for empty beer plastic containers.

Environmental Management Agency adopted a quadrant in Harare bound by Samora Machel Avenue, Hebert Chitepo, Seventh Street and Sam Nujoma as a pilot project to spearhead cleanups in other areas. The adoption of the quadrant by the Agency was done to come up with workable strategies that would be replicated and implemented to other zones with similar problems.

6.8 Media Outreach and Feedback

The Agency used various platforms of mass communication. These included print, electronic and social media. Media tours played a significant role in raising the Agency’s publicity as journalists published and broadcast environmental stories. Social media platforms such as Facebook, Twitter and WhatsApp were as instrumental in getting feedback from stakeholders as the toll free. Feedback is essential as it is a measure of the organisations corporate image and reputation by external stakeholders.

6.8.1 Media Tours

A total of 55 media tours were held throughout the year. The tours focused on wetlands, waste management, illegal mining, veld fires and land degradation. The media tours were in Mashonaland Central, Mashonaland East, Midlands, Masvingo, Harare, Matabeleland North and Mateleland South Provinces. National and provincial media houses were represented during the media tours.
6.8.2 Electronic Media Programmes

A total of 8 million people were reached in the country through 119 radio and 73 TV programs broadcast during the period under review. The programs focused on veld fire management, waste management, Environmental Impact Assessment, Community Projects, Environmental Management Agency Laboratory, Hazardous substances management, wetlands protection as well as land degradation amongst other topical environmental issues.

6.8.3 Print Media

An estimated 7.1 million people were reached through 964 print media articles on topical environmental issues that were flighted in the country’s national, regional and community newspapers which included; The Herald, Financial Gazette, Sunday Mail, The Chronicle, Manica Post, Daily News, Newsday, The Standard and The Mirror amongst others. The articles were published by journalists following media tours held and media alerts sent by the Agency. In some instances, journalists were invited to the Agency’s functions resulting in the publication of environmental stories. The Agency’s sponsored pages in the Herald and Chronicle published 77 articles on waste management, land degradation, veld fire management, Environmental impact assessments and the Environmental Management Agency Laboratory. The Agency sponsored a column in the Standard to spread its tentacles on environmental awareness. The column targeted the business community and focused on encouraging sustainable business ethics.

6.8.4 Website www.ema.co.zw

The Agency maintained an interface with the public from Zimbabwe and beyond through constant updates on the website. Uploads on topical environmental issues such as waste management, veld fire management and the safe handling of hazardous substances, were posted on a weekly basis as well as the Agency’s functions and upcoming events. This reached out to an estimated 2 million readers.

A total of 1531 enquiries were received on the Agency’s corporate email, eep@ema.co.zw. Most of the enquiries were on; licensing requirements, complaints on backyard waste burning, job seeking, invitation to meetings and requests for academic information.
6.8.5 Facebook/Twitter
An estimated 27,274 people were reached through the Agency’s Facebook page throughout the year. This was a result of the 56 messages and events posted onto the page. This was coupled by 88 comments, 41 shares and 499 likes. Topics which attracted the attention of many included the call for motorists and passengers to desist from littering, the reduction of EIA fees and the Pomona Dumpsite fire outbreak.

The Agency’s twitter account is linked to the Facebook account hence everything that was posted on Facebook also appeared on twitter.

6.8.6 Toll Free
The toll free line recorded a total of 2,472 messages from stakeholders reporting on deforestation, waste management, stream bank cultivation, land degradation, Environmental Impact Assessments, veld fires and hazardous substances. Some were complaints concerning the above environmental issues, inquiries as well as compliments on the Agency’s visibility. The feedback assisted the Agency in effective programming as it provided the information that stakeholders needed.

6.8.7 WhatsApp
The Agency’s WhatsApp platform was an active communication forum with the public. During the course of the year, it received 1050 messages which were mostly inquiries and complaints. Manicaland, Mashonaland West and Mashonaland Central acquired WhatsApp lines which they used to receive feedback and broadcast environmental messages to clients.

6.9 Publicity and Promotional Materials Produced
The Agency reached out to the public through the production and distribution of promotional and publicity materials that carried environmental messages.

The Agency produced 277,460 pieces of publicity and promotional material in the form of brochures, stickers, booklets, calendars, Christmas cards, folders, fact sheets, T-shirts, bandanas, lanyards, pens and rulers. Such material were distributed during commemorations, exhibitions, roadshows, school talk shows and awareness meetings to reach out to the public.
7.0 Capacity Building

Various activities were carried out during the year to monitor the environmental hotspots so as to establish areas which needed the Agency’s attention and intervention. This was done through meetings with communities and stakeholders, capacitation of local authorities, environmental profiling, ecological assessments, flagship and community environmental projects.

7.1: Institutional Strengthening for Improved Environmental Stewardship

A total of 3,811 environmental meetings were held throughout the country and attended by 138,653 people. The workshops and meetings were capacity building workshops with traditional leaders, law enforcement agencies, civic organisations, corporates and representatives of churches.

The Agency engaged various church organisations and individual churches to spread environmental awareness to congregants. This resulted in an eco-conscious Christian community which initiated environmental programmes such as clean up campaigns, adoption of streets, among others. Church organisations engaged included Zimbabwe Council of Churches (ZCC), Union for the Development of Apostolic Churches in Zimbabwe, Africa (UDACIZA), Zimbabwe Catholic Bishop’s Conference (ZCBC), and Evangelical Fellowship of Zimbabwe (EFZ). Other churches engaged included Zimbabwe Council of Churches (ZCC), Union for the Development of Apostolic Churches in Zimbabwe, Africa (UDACIZA), Zimbabwe Catholic Bishop’s Conference (ZCBC), and Evangelical Fellowship of Zimbabwe (EFZ). Church organisations engaged included Zimbabwe Council of Churches (ZCC), Union for the Development of Apostolic Churches in Zimbabwe, Africa (UDACIZA), Zimbabwe Catholic Bishop’s Conference (ZCBC), and Evangelical Fellowship of Zimbabwe (EFZ). Church organisations engaged included Zimbabwe Council of Churches (ZCC), Union for the Development of Apostolic Churches in Zimbabwe, Africa (UDACIZA), Zimbabwe Catholic Bishop’s Conference (ZCBC), and Evangelical Fellowship of Zimbabwe (EFZ). Other churches engaged included Christ Embassy, SDA, ZAOGA and Apostolic Sectors among others. A total of fifteen (15) stakeholder engagement meetings and 36 environmental awareness meetings were held with churches countrywide reaching an audience of 5,695 congregants.

7.2 Local Environment Action Plan (LEAP)

Under the LEAP programme, the Agency capacitates Local Authorities (LA) on the development of Local Environment Action Plans and supports RDCs’ environment programmes through the provision of Environment Grants. The priority areas for the year 2016 included solid and liquid waste management in urban authorities and veld fires, wetland management, and gully reclamation in RDCs.

Thirteen (13) councils were trained in LEAP namely Nyaminyami RDC, Chinhoyi Municipality, Zvimba RDC, Goromonzi RDC, Gwanda RDC Beitbridge RDC (Lutumba), Vungu RDC (8 wards), Zibagwe RDC (4 wards), Runde RDC (10), Chirumanzu RDC (6), Mberegwa (10), Gokwe North (2), Gokwe South (1).

A total of 20 RDCs were supported with Environment Grants during the year while three town councils namely Karoi, Marondera and Harare were supported in the implementation of waste management projects through Community Based Organisations. The RDC projects supported with the grant included 11 waste management projects, 5 veld fire management projects, 1 weir dam construction and one each of stream bank cultivation and gully reclamation projects. The waste management projects involved the installation of communal waste receptacles at growth points and purchase of waste management equipment for Community Based Organisations while veld fire management interventions such as the purchase of firefighting equipment, beekeeping, hay baling projects were implemented.
7.3 Community Initiated Environmental Projects in Partnership with the Agency

The Agency supported community projects with a focus on environmental management and livelihood improvement during the year. A total of 106 projects were supported, which translated to a 9.2% increase in the number of projects supported against a target of 10%. The priority project areas considered included land rehabilitation, beekeeping, eradication of invasive alien species, wetland protection and waste management. In addition to the 106 projects financially supported by the Agency, 66 existing projects were monitored.

7.3.1 Land Rehabilitation

The over exploitation and unsustainable utilisation of land resources through cropping, livestock grazing, expansion of settlements, deforestation and failure to observe land use boundaries were identified as the major drivers to gully erosion in the country. The increasing population densities coupled with poor farming practices have led to land cover, ecosystem changes and the reduction of the productive capacity of the land. The Agency responded to the challenge through stakeholder engagement, awareness programmes, and gully reclamation. Under the “Food for Work” Programme, the Agency implemented lantana camara eradication projects in 20 districts. Lantana camara eradication and gully reclamation projects were done to restore land to its original use hence supporting community livelihoods. Box 1 gives a snapshot of 2 gully reclamation projects out of the 8 implemented.

Box 1: Gully Reclamation Projects: Chigombe and Hukuimwe Gullies in UMP.

The Agency supported two gully reclamation projects in UMP. In plate 7.3 (Chigombe gully), the community with guidance from DDF prepared trenches for gabion construction while the Hukuimwe gully project (Plate 7.4) was implemented to completion. Chigombe gully has a depth of 1.5m, width of 10m and a length of 50m. It is threatening a major road and a settlement with 200 families which is 13.4 m from the gully.

A similar project; the Chireya- Hwange Sanyati Biological Corridor Project is being implemented where communities gathered stones for gabion construction to protect Chireya Hospital and the collapse of the UME river banks due to erosion. In Chireya, 300ha of land under agriculture, grazing and settlement were under threat.
7.3.2 Beekeeping Projects

Beekeeping projects protected the forest from fires and deforestation while providing a livelihood option for communities. The year saw the establishment of 9 beekeeping projects. The project members benefitted an average of $120 per month from the sale of honey. In Bindura, a beekeeping project was established in ward 6. The project was tied with lantana camara eradication as the species has a negative impact on the quality of honey. The community also prepared fireguards within the ward to protect the project. An estimated 3.5 ha of land was cleared of lantana camara while a cumulative length of 1.8 km fireguard was constructed; plate 7.5 shows the beekeeping project in Bindura.

In Chikomba District, the Agency supplied 32 beehives and the community mobilized funds to purchase more materials for beehives. The project was also replicated by a new group of 13 households from Dunkirk farm, in the same ward.

7.3.3 Thatch Grass Projects

Grass combing projects were successfully implemented in Mashonaland East and Matabeleland South and Midlands provinces with a total of 41 171 bundles being harvested; protecting a total of 86 hectares. An estimated US$411.71 was realized from the sales at an average cost of 10c per bundle, plates 7.6 and 7.7 refer.

7.4 Flagship Projects

The Agency is implementing four flagship projects namely the Scaling up Climate Change Adaptation in Zimbabwe through Strengthening Integrated Planning Systems Project; Hwange Sanyati Biological Corridor, Wetlands Management and Utilization Guidelines in the context of a changing climate and the National Action Plan for the United Nations Convention to Combat Desertification. These projects were funded by UNDP, GEF, WWF and UNEP/GEF respectively.
7.4.1 Hwange Sanyati Biological Corridor Project

A World Bank mission visit was conducted for the Hwange Sanyati Biological Corridor Project in June 2016. The purpose of the visit was to update the project funders and implementing partners on the status of the project. Other activities carried out during the year included the installation of 50 x 10000 l water harvesting tanks on 36 buildings, training of 3 Environment Subcommittees and community feedback meetings. Two studies were carried out by the Soil Conservation Department of the UZ and the Geological Survey Department to establish the soil and geological characteristics of the area in order to prescribe suitable soil erosion control strategies. A Sustainable Land Management model was established as an output. The implementation of the model saw the establishment of stone gabions at Chireya Hospital and along UME River. The gully was extensively mapped to show its fingers for monitoring purposes.

School environmental clubs were engaged to participate in the gully reclamation project through soil erosion monitoring. A total of 6 soil erosion monitoring plots were established together with weather stations within the catchment at Denda, Chinyengetu, Masemo, Chireya, Zumba, and Madzivazvido Secondary Schools.

7.4.2 National Adaptation Plan (NAP) for Climate Change Adaptation

The four year UNDP supported project, “Scaling Up Adaptation In Zimbabwe, Through Strengthening Integrated Planning Systems” led by the Ministry of Environment, Water and Climate
and Implemented by the Environmental Management Agency (EMA) has an overall objective of strengthening planning and budgeting processes, development and climate change adaptation investment frameworks at national, provincial and district levels. In the year 2016, consultations were in 7 provinces namely Matabeleland North, Matabeleland South, Bulawayo, Midlands, Mashonaland West, Mashonaland East and Mashonaland West and 12 districts; Zaka, Mwenezi, Beitbridge, Umguza, Matobo, Tsholotsho, Chiredzi, Chimanimani, Buhera, Umzingwane, Bubi and Binga. The consultations were aimed at establishing existing climate change adaptation initiatives and gaps so as to develop the National Adaptation Plan (NAP). A total of 518 individuals were consulted.

A Training of Trainers workshop supported by the UNDP Regional Centre was conducted in May 2016 and 48 individuals drawn from national, provincial and district levels participated. The engagements resulted in the introduction of the Scaling up Adaptation in Zimbabwe, Through Strengthening Integrated Planning Systems Project in the 12 districts. Integrated Climate Risk Management Working Groups were established in the districts and capacitated on the interpretation of weather information as an adaptation strategy, the causes and effects of climate change, the NAP process and ability of identifying their own adaptation gaps and needs. A consultant was engaged for the development of the baseline report and the development of the NAP.

7.4.3 Wetland Management and Utilization Guidelines

An economic valuation of two Ramsar sites in the rural and urban set-ups was carried out. The wetlands selected for the study were Monavale in Harare and Driefontein (Chirumanzu, Gutu and Chikomba). Environmental Management Plan for Driefontein wetland was developed.
Consultative meetings for the production of an environmental management plan were conducted with 8 communities around Driefontein grasslands. The communities spanned from Chivhu, Mvuma and Gutu Districts. The purpose of the environmental management plan was to ensure sustainable environmental management within the Ramsar site.


Under the Voluntary UNCCD Reporting platform, the Agency developed the UNCCD biannual report for the period 2014/15. The report captured mainly the country’s initiatives to combat Desertification, Land Degradation and Drought (DLDD) under five (5) operating objectives; Advocacy and awareness, Research, Capacity Development, Policy Framework and Financing during the period. According to the report, there is an imbalance between the level of land degradation and efforts to rehabilitate the degraded areas. A total of 14,207 DLDD awareness events were held during the 2 year period reaching out to 6,099,376 people.

As a follow up to the United Nations Convention to Combat Desertification (UNCCD) Conference of Parties 12 resolutions to engage national leaders on the implementation of DLDD issues, the Parliamentary Portfolio Committee on Environment was engaged through parliamentary brief. State of the environment maps and information for DLDD related themes were developed for 41 constituencies. This was done to ensure an integrated approach in development and capacitating political leaders on environmental issues of concern in all constituencies. A Land Degradation Neutrality (LDN) specialist was nominated for Zimbabwe to coordinate UNCCD initiatives, the development of LDN targets and Integrated Landscape Management projects.

7.5 Environmental Profiling

Environmental assessments were carried out that feed into the Zimbabwe Environment Outlook which is developed every five years. The 2008-2013 draft was in place following the review of the 7 chapters during the year. To enable the provision of information on soil erosion under the Land Chapter, the Agency established 21 soil erosion assessment sites, six (6) of which were established in the year 2016 in the UME catchment. A total of 31 wetland assessments and 5 district environmental profiles were carried out in Chikomba, Mhondoro Ngezi, Dema and Norton during the period under review. Three (3) waste generation and characterisation surveys were carried out for the establishment of area specific waste management plans for residential and commercial areas in Harare, Chinhoyi and Mutare while the assessment of illegal mining was carried out for Mutasa, Nyanga, Chimanimani, Mutare and Uzumba Maramba Pfungwe.

7.5.1 Ecological Assessment of Sugarcane Estates in Southeast Lowveld Zimbabwe

A research was carried out in the sugar cane growing areas of the South East Lowveld to establish the level of pollution and its effects on the aquatic life, livestock and downstream communities. The Agency partnered with Southern Alliance for Indigenous Resources and Care International on the project. The results indicated that upstream points were mainly affected by Biological Oxygen Demand (BOD) although to a less extent, while the downstream points were affected by pH, Conductivity, phosphates and nitrates, parameters which are known to be contributed by the Sugarcane Estates’ operations.

The benthic algal communities and diatom assemblages reflected watershed manipulations by humans in Chiredzi District and showed that there were some sites that had bad water quality. According to people’s perceptions, the emissions from the sugar plantations are the major cause of fish loss and reduced ecosystems services like clean water for domestic use along Runde River over the last 5 years. The research recommended that there was need for the sugar industry to take-up management measures for the prevention and control of dark coloured water downstream, and the regulatory authorities to monitor the health of the river frequently so as to safeguard the livelihoods of the people living downstream.
8.0 Information Technology

The Agency initiated automation of its internal processes through the adoption of the Systems, Applications and Products (SAP) which is an electronic business platform. The platform was introduced in line with the government’s thrust of ease of doing business and single window facility at the ports of entry and exit. The facility brought substantial savings in compliance costs and will also save time for all EMA customers as it enables clients to apply for licences online at their convenience without having to visit EMA offices. The system further reduced EMA’s carbon footprint through a reduction in printing of licences, invoices and receipts. The Agency acquired hardware and software for Head office, 10 provincial offices, 6 borders and 2 district offices, plate 8.1 refers.
9.0 Human Resources

Despite the harsh macro-economic environment, the Agency effectively managed its human resources in order to achieve its set goals. The removal of the Government Grant by Treasury impacted negatively on the Agency’s operations. Regardless of the challenges, the Agency adopted a cocktail of strategies which resulted in the development and facilitation of various training as a major boost for achieving the Agency’s mandate. To this end, a harmonious industrial relations climate has continued to prevail in the Agency.

9.1 Recruitment and Terminations

A summary of the staff establishment in the year 2016 is indicated in the table below.

<table>
<thead>
<tr>
<th>Approved Establishment 01/01/16</th>
<th>Filled as At 31/12/16</th>
<th>% 01/01/16</th>
<th>Recruited</th>
<th>Total</th>
<th>Wastage</th>
<th>Filled as at 31/12/16</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>480</td>
<td>325</td>
<td>67.7%</td>
<td>7</td>
<td>332</td>
<td>3</td>
<td>329</td>
<td>68.5%</td>
</tr>
</tbody>
</table>

While recruitment was down in response to our overall budget environment, seven key and vital positions were filled in order to maintain good service delivery without compromising the mandate of the Agency.

9.2 Employee Training and Development

The Agency facilitated a number of training and developmental programmes which witnessed a number of staff members attending several seminars, retreats and workshops to stay informed and remain current with emerging trends. These programmes were conducted both locally and outside the country throughout the year.

9.3 Performance Management

Maintenance of the Results Based Management (RBM) System was another priority for the Agency. All new appointments to include the Environment Management Board, which was appointed on 21 February, 2016 received training on RBM.

9.4 Labour Relations

The Agency continued to value and maintain a cooperative and collegial working relationship with the workers, focusing on resolving grievances. Throughout the year, regular Works Council meetings were held to review and/or settle outstanding worker concerns. Workers Committees continued to be active, which ensured that issues had an opportunity to be addressed timely. This process proved beneficial in enhancing employee engagement.

9.5 Human Resources Administration

In line with the ease of doing business directive by the government, the Agency embarked on the automation of HR process. The first phase of automation comprised of three modules namely: Personnel Management, Training and Event Management and Organisational Management. The automation sought to increase efficiency, in order to improve employee service delivery, reduce paper work and accuracy among other aspects.
<table>
<thead>
<tr>
<th>Note</th>
<th>ASSETS</th>
<th>Non-CURRENT assets</th>
<th>31-DEC-16</th>
<th>31-DEC-15</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Property, plant and equipment</td>
<td>8,849,163</td>
<td>8,886,145</td>
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<tr>
<td></td>
<td></td>
<td>Inventories</td>
<td>235,398</td>
<td>323,714</td>
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<tr>
<td></td>
<td></td>
<td>Trade and other receivables</td>
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<td>21,483,023</td>
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<tr>
<td></td>
<td></td>
<td>Cash and cash equivalents</td>
<td>10,209,582</td>
<td>9,453,651</td>
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<td></td>
<td></td>
<td>Prepayments</td>
<td>365,641</td>
<td>992,174</td>
</tr>
<tr>
<td></td>
<td><strong>Total Assets</strong></td>
<td></td>
<td>37,883,636</td>
<td>41,138,707</td>
</tr>
<tr>
<td></td>
<td>RESERVES AND LIABILITIES</td>
<td>Reserves</td>
<td>27,281,548</td>
<td>25,601,088</td>
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<tr>
<td></td>
<td></td>
<td>Accumulated funds</td>
<td>23,611,246</td>
<td>21,930,786</td>
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<tr>
<td></td>
<td></td>
<td>Revaluation reserve</td>
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<td>2,115,590</td>
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<tr>
<td></td>
<td></td>
<td>Capital reserve</td>
<td>1,554,712</td>
<td>1,554,712</td>
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<tr>
<td></td>
<td>Non-Current Liabilities</td>
<td></td>
<td>120,900</td>
<td>131,200</td>
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<td></td>
<td></td>
<td>Deferred income</td>
<td>120,900</td>
<td>131,200</td>
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<tr>
<td></td>
<td>Current liabilities</td>
<td></td>
<td>10,481,190</td>
<td>15,406,419</td>
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<td></td>
<td></td>
<td>Trade and other payables</td>
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<td>14,570,658</td>
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<td>Provisions</td>
<td>1,240,132</td>
<td>835,761</td>
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<tr>
<td></td>
<td><strong>Total Reserves and liabilities</strong></td>
<td></td>
<td>37,883,636</td>
<td>41,138,707</td>
</tr>
</tbody>
</table>

2 March, 2017

J Bondera
(A/Finance and Administration Manager)

2 March, 2017

A. Chigona
(A.Director General)

6 March, 2017

Ambassador Z. Nsimbi
(Board Chairperson)
# ENVIRONMENTAL MANAGEMENT AGENCY

## STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

for the year ended December 31, 2016

<table>
<thead>
<tr>
<th>Note</th>
<th>Description</th>
<th>31-DEC-16 (USD)</th>
<th>31-DEC-15 (USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15,368,080</td>
<td>20,042,946</td>
</tr>
<tr>
<td></td>
<td>Permit and License fees</td>
<td>13,321,323</td>
<td>16,358,535</td>
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<tr>
<td></td>
<td>Grant</td>
<td>362,291</td>
<td>2,218,100</td>
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<tr>
<td></td>
<td>Other income</td>
<td>1,684,466</td>
<td>1,616,538</td>
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<tr>
<td></td>
<td><strong>Less Expenditure</strong></td>
<td>13,687,619</td>
<td>23,002,716</td>
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<tr>
<td></td>
<td>Administration expenses</td>
<td>12,118,219</td>
<td>12,032,879</td>
</tr>
<tr>
<td></td>
<td>Zimra VAT penalties</td>
<td>0</td>
<td>9,224,341</td>
</tr>
<tr>
<td></td>
<td>Other costs</td>
<td>1,569,400</td>
<td>1,745,496</td>
</tr>
<tr>
<td></td>
<td><strong>Surplus/(Deficit) for the year</strong></td>
<td>1,680,461</td>
<td>(2,959,770)</td>
</tr>
<tr>
<td></td>
<td>Other comprehensive income</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td><strong>Total comprehensive income/(loss)</strong></td>
<td>1,690,461</td>
<td>(2,959,770)</td>
</tr>
</tbody>
</table>
### Environmental Management Agency

**Statement of Changes in Reserves**

for the year ended December 31, 2016

<table>
<thead>
<tr>
<th>Fund</th>
<th>Reserve</th>
<th>Capital</th>
<th>31-DEC-15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Reserve</td>
<td>USD</td>
<td>USD</td>
<td>USD</td>
</tr>
<tr>
<td><strong>Balance at January, 2015</strong></td>
<td>24,890,556</td>
<td>2,115,590</td>
<td>1,554,712</td>
</tr>
<tr>
<td><strong>Surplus for the year</strong></td>
<td>(2,959,771)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Balance as at December 31, 2015</strong></td>
<td>21,930,785</td>
<td>2,115,590</td>
<td>1,554,712</td>
</tr>
<tr>
<td><strong>Balance as at January 1, 2016</strong></td>
<td>21,930,785</td>
<td>2,115,590</td>
<td>1,554,712</td>
</tr>
<tr>
<td><strong>Surplus for the year</strong></td>
<td>1,680,461</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Balance as at December 31, 2016</strong></td>
<td>23,611,246</td>
<td>2,115,590</td>
<td>1,554,712</td>
</tr>
</tbody>
</table>
### ENVIRONMENTAL MANAGEMENT AGENCY

**STATEMENT OF CASH FLOWS**

for the year ended December 31, 2016

<table>
<thead>
<tr>
<th>Note</th>
<th>HISTORICAL COST</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>31-DEC-16</td>
</tr>
<tr>
<td></td>
<td>USD</td>
</tr>
<tr>
<td>Cash flows from operating activities</td>
<td>2,093,418</td>
</tr>
<tr>
<td>Cash from operating activities</td>
<td>3,449,000</td>
</tr>
<tr>
<td>(Deficit) Surplus for the year</td>
<td>1,680,461</td>
</tr>
<tr>
<td>Adjusted for:</td>
<td>1,768,538</td>
</tr>
<tr>
<td>Interest earned</td>
<td>(272,056)</td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,644,137</td>
</tr>
<tr>
<td>Provisions</td>
<td>404,371</td>
</tr>
<tr>
<td>Deferred Income</td>
<td>(10,300)</td>
</tr>
<tr>
<td>Exchange rate gain</td>
<td></td>
</tr>
<tr>
<td>Loss on disposal</td>
<td></td>
</tr>
</tbody>
</table>

Changes in working capital | (1,355,579) | 4,208,073 |

(Increase) in trade and other receivables | 3,259,171 | (8,956,337) |
(Increase)/decrease in prepayments | 626,533 | (813,672) |
( Increase) in trade and other payables | (5,329,599) | 13,756,280 |
Decrease/(increase) in inventory | 88,316 | 221,802 |
Cashflow from investment activities | (1,337,487) | (984,930) |
Acquisition of property, plant and equipment | (1,612,623) | (1,407,312) |
Proceeds on sale of property, plant and equipment | 3,080 | - |
Interest received | 227,056 | 442,382 |

Net increase in cash and cash equivalents | 755,931 | 1,348,290 |
Cash and cash equivalents at beginning of year | 9,453,651 | 8,105,361 |
Cash and cash equivalents at end of year | 10,209,582 | 9,453,651 |
11.0 EMA Branch Network

**Head Office:** 685/6 Lorraine Drive, Bluffhill Industrial Area, Harare, **VOIP 08677006244**, Tel: 04 305 188, 305407, 305550, 305407; Email eep@ema.co.zw, Toll Free; 08080028.

**Harare Province:** Number 6 (off Pauling Drive), KG VI, Borrowdale, PO Box 385, Causeway, Harare, **VOIP 08677006244**, Tel: (04) 792772,252087.

**Manicaland:** 66, 4th Street Mutare, **VOIP 08677006244**, Tel: (020)62509 / 65010.

**Masvingo:** NO. 3 Hellet Street, P .O. Box 425 Masvingo, **VOIP 08677006244**, Tel: (039) 264056/262776.

**Midlands:** No.4 Lobengula Ave, Gweru, **VOIP 08677006244**, Tel: (054) 222117,222084.

**Mash West:** New Chinese Complex, Opposite Government Hospital, PO Box 432 Chinhoyi, **VOIP 08677006244**, Tel: (067) 23205, 23206, 22427.

**Mash East/Marondera:** 1 Aster Close, Winston Park, Marondera PO Box 610, **VOIP 08677006244**, Tel: (0279) 23344/23671/21907/25960, Bulawayo/

**Mat North:** Glendyne Building, 12th Avenue between Samuel Panirenyatwa and Josiah Tongogara, **VOIP 08677006244**, Tel: (09) 64705.

**Mat South:** New Government Office 4th Avenue, Box 386, Gwanda. **VOIP 08677006244**, Tel: (0284) 22792, 23173, 22260.

**Mash Central:** New Government Complex, Mutungagore Building, Box 182, Bindura, **VOIP 08677006244**, Tel: (0271) 6842/6685

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