

Makana Municipality
Local Environmental Action
Plan
Environmental Management
System for Makana Municipality

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Introduction

In order to gauge success of LEAP initiatives in improving the environment in the Makana Municipality, an Environmental Management System (EMS) must be in place to monitor the projects. An EMS is a tool that can be used to ensure that projects or plans put in place to deal with environmentally related problems, are regularly reviewed to ensure the municipal and community objectives are being achieved. This can also assist in ensuring funding is properly allocated and utilised wisely. The EMS is structured as forms and checklists which have been drawn up for the key strategic areas of the LEAP in order to guide the observer through the thinking around each project. Monitoring information must be fed back to the LEAP to ascertain success of projects, make changes or recommendations for improvements or interventions. Continued monitoring of the situation on the ground is a key tool for efficient, proactive environmental management. A full-scale monitoring plan for checking the status of the environment in Makana was drawn up as a separate document and should be followed as closely as possible. The current document does by no means override the full monitoring plan, but should rather be used to facilitate the interaction of different processes in the LEAP.

It is important to note that an environmental management system should not be static or rigid but should adapt, develop and evolve to best fit the Municipality's requirements and structures. A good EMS can take a few years to be in place and requires the dedication of the all participants to make it efficient and effective.

Principles guiding the development of the EMS

The EMS being proposed must comply with a set of principles, which will enable it to be effective and to minimise the work load involved in maintaining the system. The principles guiding this EMS include:

1. The basis of the system is “Plan, Do, Review”. In other words all elements of the system must fall under one of these categories, so to ensure that the element has a meaningful function.
2. The elements of the system should come from current LEAP deliverables, such as the LEAP implementation plan, environmental audit report etc. The system must also make use of current structures in the municipality such as the LEAP Steering Committee.
3. The number of elements required to maintain the system must be minimised to reduce the work load and enhance the effectiveness.
4. The system must be practically implementable rather than aspiring to a theoretical ideal.
5. The system must not require excessive funding to be maintained.
6. The system should always be reviewed from a point of environmental improvements on the ground.
7. Participation by the people directly involved in the projects or implementation plans is crucial to the system.

Overview of the proposed Environmental Management System (EMS)

The environmental management system will focus on key strategic areas as identified in the LEAP process: water, waste management, sanitation, livestock management, biodiversity and urban greening. In addition to these key strategic areas, environmental protocols for new projects, hazardous waste spills, historical and cultural aspects and emergency responses have been drafted.

The proposed EMS has been created to be simple with minimal documentation. The EMS would be the responsibility of the Environmental Officer, appointed under the new regulations, in conjunction with a LEAP task team and overseen by a steering committee. The EMS will primarily involve the monitoring of the implementation plans put in place to deal with environmental issues. The EMS will also include procedures for dealing with environmental emergencies and spills. This will ensure the proper management of environmental impacts and accidental spills and controlled releases of hazardous substances into the environment.

The EMS will ensure that the driving force behind LEAP implementation plans is maintained and that the municipality, council and members of the public are kept informed of progress. The EMS will thus help to give assurance to funding agencies that funds are being spent according to plans, inform the public and keep stakeholder dialog open.

The diagram below sets out the flow of information within the proposed EMS:

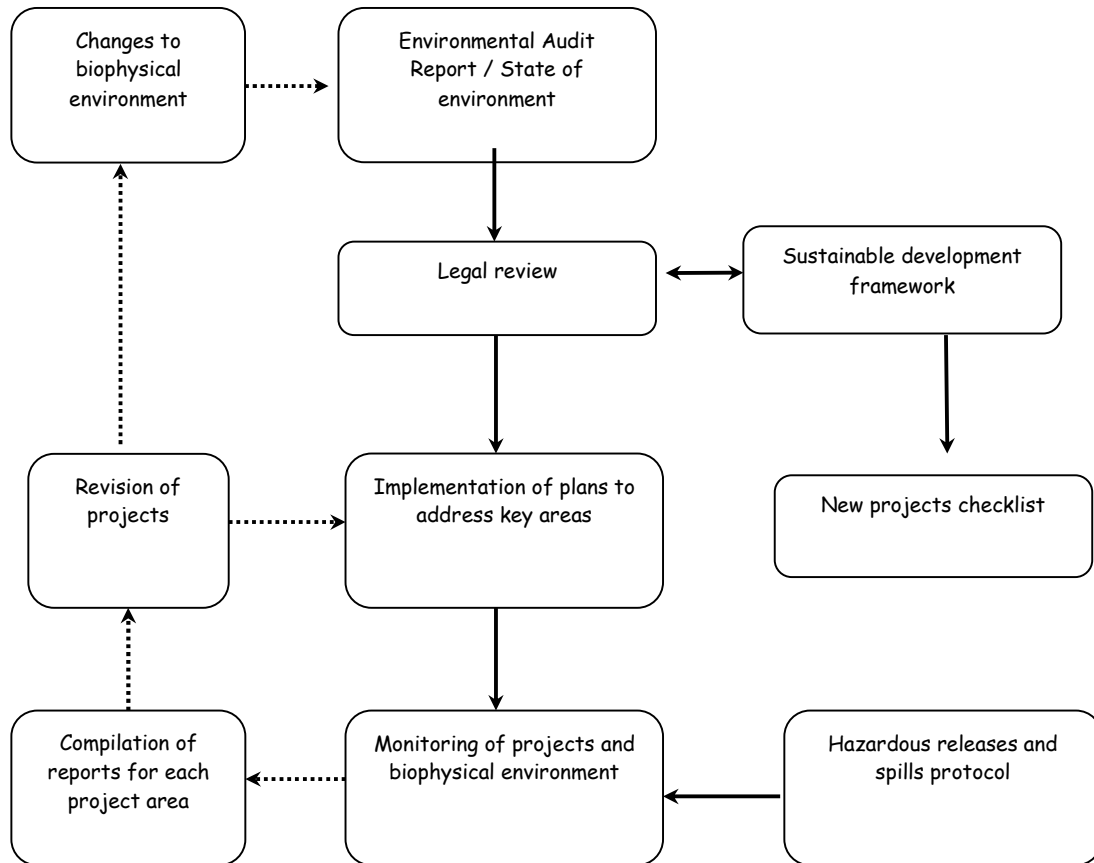


Diagram 1: Information flow of the Environmental Management System.

The EMS should integrate existing LEAP products (EAR, SDF, full monitoring plan and implementation plans) into a system which would allow for their continuance, monitoring, expansion and development as progress is made towards a more environmentally friendly and sustainable municipal vision.

The state of the environment is not static and the Environmental Audit Report (EAR) describes the state of the environment in Makana at a moment in time i.e. in 2004. As implementation plans are put into action, the state of the environment should improve. The monitoring of the success of the implementation plans will also be a means of collecting information about these improvements and therefore will continually update and develop new versions of the original EAR. The EAR can also be used to motivate for funding to implement strategic interventions to improve the environmental management in Makana. Procedures for emergency clean up of environmentally damaging spills have been designed to minimise environmental impact as well as health and safety impacts.

Simple monitoring forms have been designed to document the success or shortcomings of implementation of strategic interventions by municipal employees. This information needs to be reviewed by a special LEAP task team in order to make appropriate decisions about revision or adaptation of the interventions to optimise effectiveness. The monitoring documentation can also be used to update funders, councillors and the public on progress made on each project.

Who does what?

An municipal environmental officer will be responsible for:

1. Driving the environmental management system by ensuring the appropriate people in each department are completing the forms timeously and regularly according to requirements;
2. Filling information gaps where information is required from municipal records or industry (e.g. recycling information from recycling companies);
3. Collating information from forms for the LEAP task team;
4. Attending meetings;
5. Allowing the public to access information via websites, newspaper articles or documents.

The LEAP task team will be responsible for:

1. Reviewing monitoring information;
2. Making recommendations on revisions adaptations to projects where necessary;
3. If necessary, updating the Environmental Audit Report annually with information obtained from the EMS;
4. Attending review meetings quarterly or twice a year.

The LEAP steering committee is the driving force behind the Environmental Management System and are responsible for ensuring all municipal departments are committed to its success and informed of responsibilities, structures as well as any developments.

Communication

As already outlined in Diagram 1, flow of information needs to be continuous with

reporting on progress and monitoring, adaptations to implementation plans and future plans of the projects. The LEAP task team needs to develop two way communication so that this information is available and accessible not only to relevant municipal departments, municipal officials and funders, but also to the public served by the Municipality. Feedback from all these sectors of the community must also be considered when reviewing implemented environmental interventions. A hierarchy, part of which already exists needs to be established to ensure that the project momentum continues and the management of people and funds is well structured. For this, a system is proposed whereby the existing steering committee oversees the entire process, appointing the LEAP co-ordinating team for a monitoring and project management function. This LEAP team, formed from consultants and field experts, will liaise directly with project champions on the ground. The public will also be engaged as they will feed information at various levels of the hierarchy (Diagram 2).

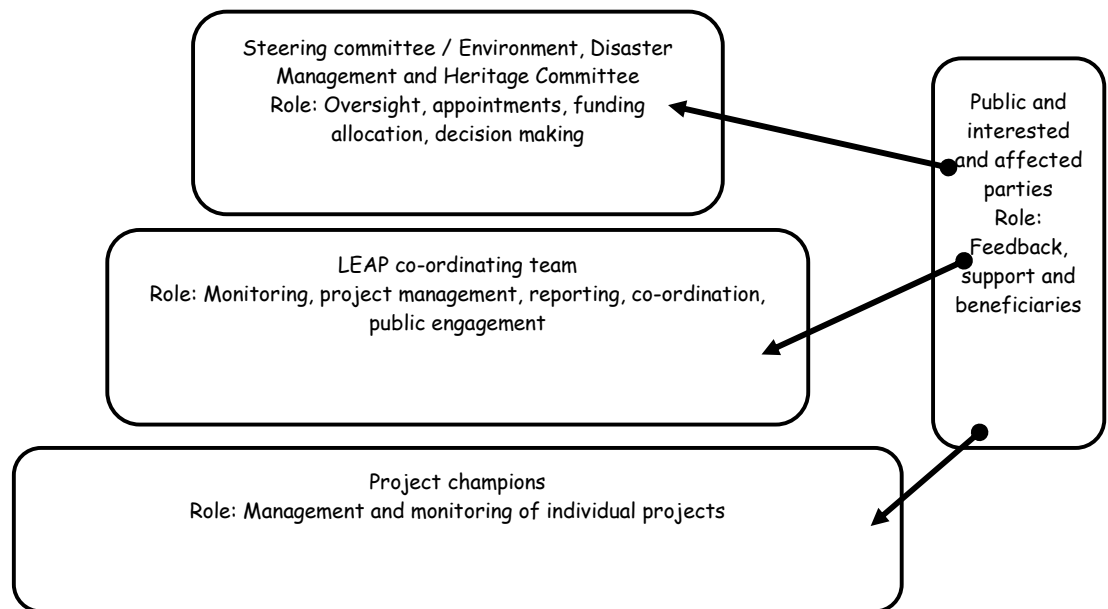


Diagram 2: Communication of Progress is vital for the success and support of the strategic interventions and an integral part of a good Environmental Management System.

Legal Review

An annual review of environmental legislation and the Municipality's compliance to environmental law should be carried out by an environmental lawyer, supported by LEAP task team members as well as municipal employees in each area. This will allow each municipal department to draw up plans and target dates to achieve legal compliance. If environmental bylaws are drawn up for Makana, these should be reviewed by the LEAP task team.

Environmental Management System elements

Sustainable development framework and new projects check list

To ensure that the municipality manages the environment in a way which moves in the direction of environmental sustainability, it is important that the Sustainable Development Framework (SDF) is implemented. This SDF, which has been created as part of the LEAP must form an integral part of the EMS. This will happen by using this framework to evaluate and inform new projects or development in the municipality. Once again a person will be required to champion this process.

The new projects checklist should work in conjunction with the SDF and is something that will evolve as time goes by. At this stage a simple checklist has been created which will assist a new developer in ensuring that the development occurs within the SDF.

The new projects checklist is Appendix 2.

Implementation plans for management of existing environmental concerns

The management of the environmental concerns is to be done by implementation plans drawn up as part of the LEAP process. These areas are Water, Sanitation, Waste (including hazardous waste), Commonage, Biodiversity and Environmental Awareness and Education.

The implementation plans will be the main focus of the EMS. Each plan will require a champion to drive and monitor the projects. This person may be a member of the LEAP team or from a relevant department in the municipality. Ultimately, the LEAP should be managed entirely by the Municipality.

Some additional environmental aspects must also be tracked by the Environmental Management System. These are carbon trading projects, urban greening, stormwater, oil and petrol disposal management and the state of indigenous knowledge.

Monitoring strategy for implementation plans (Forms)

Forms and questionnaires for each strategic area and implementation plan have been drawn up and included as appendices (Appendix 1). These are outlines of the kind of information which will be needed to review plans and assess if the health of the environment is improving due to their implementation. Most monitoring will be done by municipal employees and /or members of the LEAP team. In some areas, such as biomonitoring, experts will be used to do the monitoring as described by the implementation plans.

Environmental emergency and hazardous spill plans

As part of this EMS, it will be important to keep track of and record incidents of hazardous chemical spills. The fire department already has procedures and protocols regarding response to hazardous chemical incidents (refer to Hazardous Chemical Incidence Response Protocol: From the Chief Fire Officer 25 February 2002). This procedure is already in place and the fire department has appropriate training and equipment for this, though staff shortages occur. As part of the EMS, it will be necessary to establish a communication channel on all incidents that occur in the district involving hazardous spillages.

Review strategy

For the system to succeed, changes in environmental problem areas must be achieved. Thus it is crucial that the co-ordinating body be informed of the level of progress being made. This is proposed to be done by a LEAP task team, appointed by the municipality to continue with the LEAP process by overseeing implementation of the proposed projects. The review should take place at regular quarterly or at 6 month intervals by the group who will evaluate reports by representatives of the 6 implementation plans.

The LEAP task team should comprise of at least two municipal representatives, two community representatives and the LEAP consulting experts from the strategic areas where LEAP interventions are to be implemented. Funding for this committee or task team should be taken as a percentage of each project's budget.

Appendices

These appendices are sample questionnaires that could be used to monitor and report on implementation plan progress.

The files are:

1. [Alternative Sanitation Technologies](#)
2. [Bucket system eradication tracking](#)
3. [Illegal Dumping Tracking Form](#)
4. [Recycling tracking form](#)
5. [Sanitation questionnaire](#)
6. [Water use survey](#)
7. [Illegal Dumping Complaints](#)
8. [Millennium Tree Planting Project](#)
9. [Oil and Petrol](#)
10. [Industrial environmental management](#)
11. [Stormwater Tracking](#)

Appendix 2

[Click here for new projects checklist](#)