

## Budget for implementation of the Environmental Management Plan

The EMP has identified five priority issues that need to be included in the budgets and future integrated planning for the Alfred Nzo District. These are

- Soil erosion - loss of topsoil & fertility, siltation of rivers,
- Uncontrolled alien plant infestation,
- Loss of grassland ground cover and biodiversity, and
- Addressing climate change induced extreme events.

Other issues that have been identified such as addressing water quality and waste management have not been included in this budget because separate processes are presently taking place in the district to cater for them.

Budgeting for environmental interventions and application of mitigation measures to enhance positive impacts for the district is an investment in the future as it will greatly reduce the environmental liability at local, regional, national and even international levels. The end result of this budget that is, clean air, clean water, productive soils, healthy livestock, knowledgeable communities and overall improvement in the quality of life of the residents should be seen as an investment in the future of the district, which if implemented properly, will be repaid many times over through reduced long-term operating costs of implementing community development.

Details on the issues, causes, and the necessary remedial measures have been covered in the main report. This section will highlight the necessary actions and associated costs for the next five years.

### ISSUE 1 - SOIL EROSION - LOSS OF TOPSOIL & FERTILITY, SILTATION OF RIVERS

Action	Budget	Implementing agency
Initiate and maintain a 5 yr extension programme within the ANDM to promote best-practice range management and catchment protection, including conservation farming, rangeland management and CBRNM extension to the various projects and communities. This is a cross-cutting action for all issues.	R5 M.	ANDM, Agriculture
Implement an educational programme addressing issues as identified in the Implementation Manual for the different target groups.	R2 M.	ANDM, DAEAT, Education
Where practical and important (e.g. near rivers that are used for potable water), implement reclamation projects to stabilise and reclaim erosion gullies.	R1.8 M	ANDM, Agriculture
Diligent monitoring of implementation of environmental assessment recommendations		DAEAT

## ISSUE 2 – UNCONTROLLED ALIEN PLANT INFESTATION

Action	Budget	Implementing agency
Produce a detailed and spatially-explicit alien plant intervention plan for the district.	R800 K	ANDM,
Conduct feasibility and business plan studies on infestations that appear to be economic opportunities for charcoal, plantations, etc.	R520K	ANDM, DAFF, DWA
Reduce the area of alien tree infestation in the District by 20% focusing on priority areas identified in the intervention plan. Partner with WfW for budget.		ANDM, DAFF, DWA

## ISSUE 3 – LOSS OF GRASSLAND GROUND COVER AND BIODIVERSITY

Action	Budget	Implementing agency
Identify areas where there is leadership control to implement good range management practices and where there is a reasonable chance of reversing the trend. Use extension staff and budget.	R600K	ANDM
Use extension officers to interact with those communities to develop sound range management practices that promote rotation, rest and good fire practice. Use extension staff and budget.		
Partnership with EC Parks and DEAET to formally protect key areas through stewardship or other mechanisms within the priority biodiversity areas.		

## ISSUE 4 – CLIMATE CHANGE INDUCED EXTREME EVENTS

Action	Budget	Implementing agency
Establish a team to provide conservation farming, rangeland management and CBRNM extension to the various projects and communities. Use extension staff and budget.		ANDM
Conduct an assessment to identify which communities (people) and habitats and species are most vulnerable to climate change and how can their vulnerability be reduced.	R800K	ANDM
Monitor roads and bridges to ensure proper designs for minimum 1:50 year flood events, and construction according to specification.	R1M	ANDM
Manage burning and provide education improve range land management to increase ground cover, biodiversity and resilience to extreme weather events.	R800K	ANDM
More protection for existing water resources (wetlands, dams, springs and rivers) to support their natural function and resilience. Partner with Working for Wetlands.	R1.8M	ANDM, DEAET

Improve quality of sewage systems through appropriate design, location, monitoring, maintenance and upgrading to prevent floodwater infiltration and consequent damage and contamination		ANDM
Improved management of surface run-off through appropriate drainage design to reduce storm water damage and impacts on outfall areas e.g. rivers adjacent to towns becoming filled with solid waste after storms from run-off, and side drains becoming incised from storm run-off.		ANDM
Increase public awareness about the need for resilient landscapes and infrastructure design, and possible alternative agricultural production strategies.	R500K	ANDM