



Millennium Challenge Account
Malawi



MCC ENERGY PROJECT

ENVIRONMENT AND NATURAL RESOURCES MANAGEMENT (ENRM) COMPONENT



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SELECTED IMPACTS OF ENVIRONMENTAL DEGRADATION ON THE POWER SECTOR IN THE LAST DECADE

- **2001 Tedzani I & II Power Station-** out of service due to damage to intake screens caused by debris during flooding event. Took many years to restore normal generation .
- **2003 Nkula “B” Power Station-** seriously flooded during rainfall event due to faulty penstock. It took almost 4 months to dry up the system. Lifespan of some parts reduced considerably.
- **2009 Nkula “A” power station-** out of service due to damage of the intake screens caused by aquatic weeds. Nkula “A” and “B” out of service for almost a week - both use same pond.
- **Annually-**ESCOM spends over MK20million for weed management at Liwonde Barrage.



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OVERVIEW OF MAJOR ENRM ISSUES IN SHIRE RIVER BASIN

- Severe deforestation and erosion attributed to many factors including heavy reliance on bio-fuels, poor agricultural and land use practices, weak environmental governance, etc.
- Weed infestation thought to be caused by a combination of natural and anthropogenic factors
- Weeds and silt adversely affect performance and increase operation and maintenance costs at ESCOM hydro plants
- Improved ENRM critical to:
 - Sustainability of infrastructure investments
 - Rural development; improved livelihoods and wellbeing of communities in the area
 - Protection of ecosystems services



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ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

- All the Energy projects will be subjected to EIA screening in accordance with MCC and Malawi Government EIA guidelines.
- Rationale for EIA - determine negative impacts of the projects on the environment and the people in the area and come up with mitigation measures
- Environmental concerns include- disposal of oils, scrap metals, degradation of protected areas, surface/ground water pollution, PCB contamination, etc



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RESETTLEMENT POLICY FRAMEWORK

- Will involve social and resettlement screening of the projects resulting in development of Resettlement Policy Framework.
 - Conducted in accordance with Government of Malawi Policies and Regulations as well as MCC gender and resettlement guidelines
 - Issues investigated include the following: land acquisition for resettlement, compensations, other asset acquisition (trees, crops, etc) physical relocation, loss of access to resources (e.g. grazing land), etc.



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WEED MANAGEMENT

- Issues:
 - Improved and alternative weed management methodologies (manual/chemical)
 - Improved mechanical measures (additional weed harvesters)
 - Alternative use of disposed weeds (e.g. briquettes, handicrafts, manure, etc)
 - EIA of all weed management practices



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SILT MANAGEMENT

- Issues:
 - Procurement of appropriate silt dredges (Tedzani and Kapichira Power stations /rehabilitation of the dredge at Nkula)
 - Identify appropriate disposal sites at each facility
 - Provide alternative disposal/recycling options
 - EIA of disposal sites and recycling options



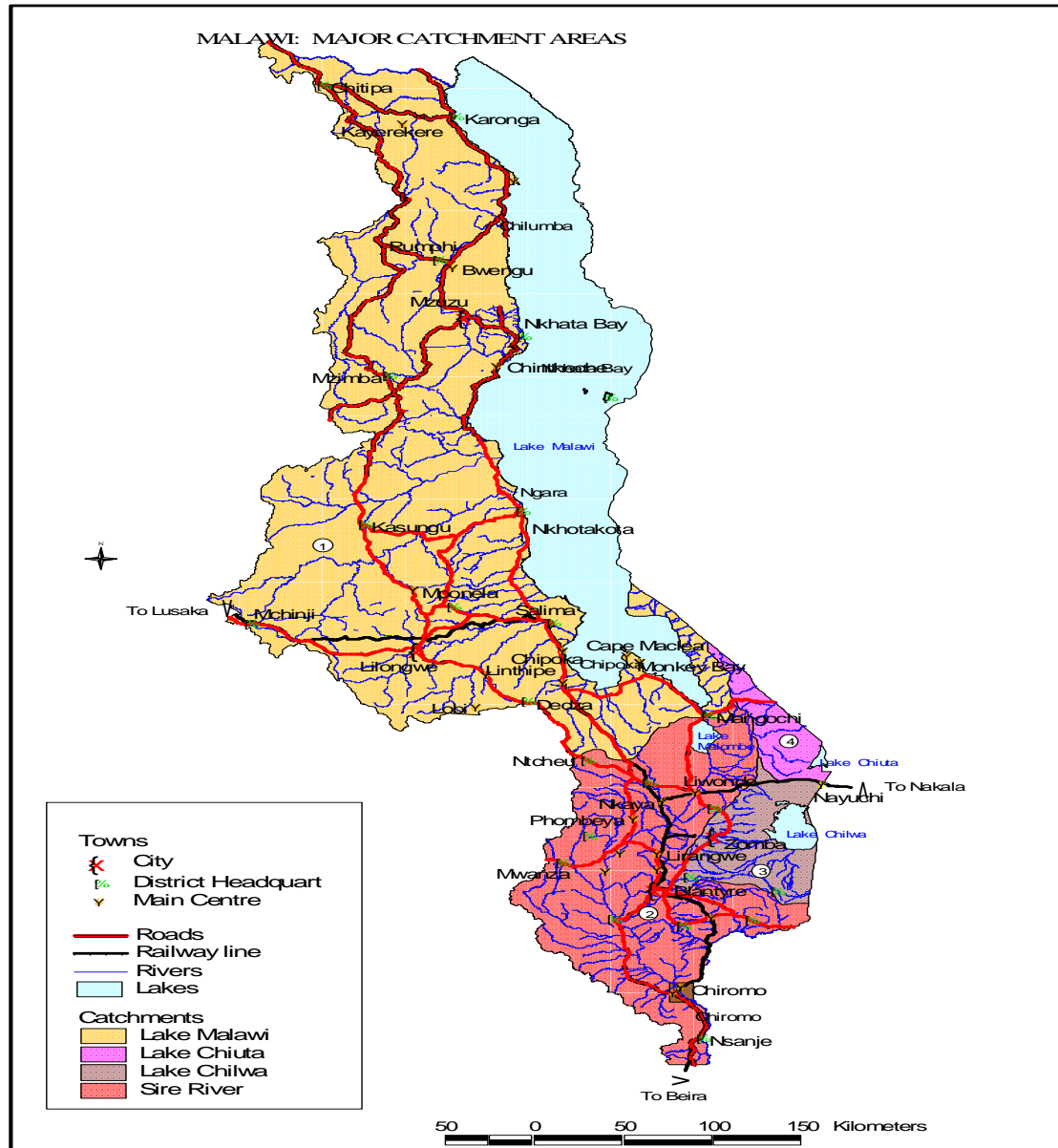
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ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT (ENRM) ACTION PLAN

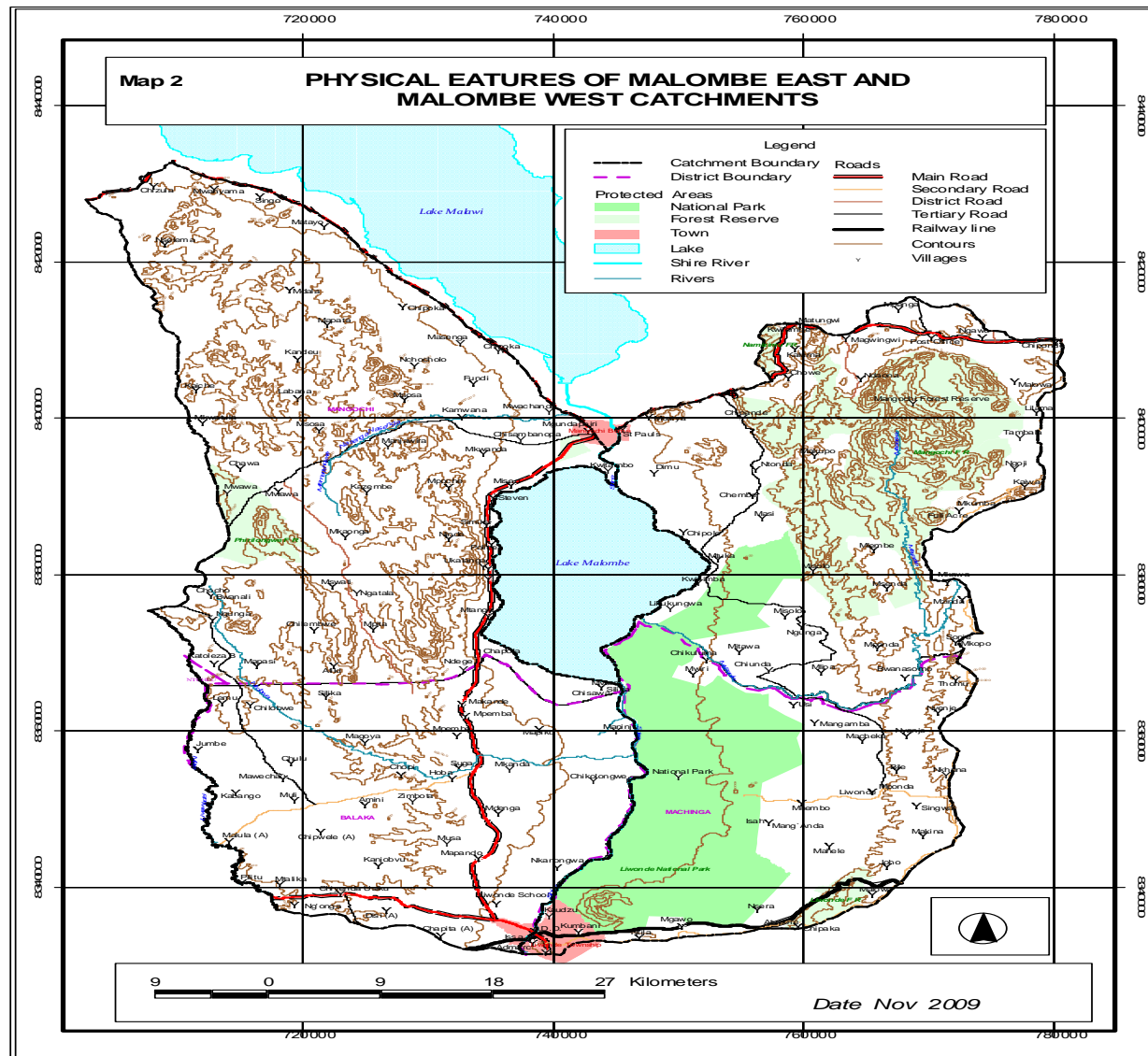


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OBJECTIVES OF ENRM ACTION PLAN

- Examine underlying causes of siltation and invasive weeds in select sub-catchments in upper Shire River (above Liwonde Barrage)
- Integrated assessment of social, economic and environmental dimensions of ENRM problems
- Identify and prioritize specific interventions to promote more sustainable land use practices
- Ensure participatory planning process, involving Communities, NGOs, Government departments, the Media and other stakeholders.
- Promote donor coordination



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TIMELINE FOR ENRM ACTION PLAN

- Procurement underway now
- Mobilization expected late April or early May
- Interim reports (baseline assessment and economic analysis) expected August/September
- Full Action Plan expected by end of year