



A submission in respect of the Environment Management Act of 2007

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Introduction

This document has been prepared at the request of the Citizens for Justice in Lilongwe, Malawi for submission to the Government of Malawi. It highlights concerns with respect to the proposed draft Environment Management Act in its current form and makes recommendations and suggestions that might be included to strengthen the Act. This includes a number of suggested and new inclusions.

This document considers Parts I – XV and the Second Schedule. It is noted that there are two parts labeled as Part VII – (Part VII – Genetic and Biological Resources; and VII – Environmental Management).

The Authors

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promotes sustainable development and the mutual trust needed for long-term investments, that can be practically adopted by governments, companies and civil society. Please visit our website (www.vcc.columbia.edu) to learn more about our research and advisory projects.

Dr Howard David Smith is acting as a private consultant and has postgraduate qualifications in the fields of Applied Chemistry, Archaeology and Tropical Environmental Management. He has a total of 28 years experience in environmental, social and technical matters related to: infrastructure development; exploration and production related to uranium mining, mineral sands mining and ilmenite production; bauxite mining and alumina production; oil and gas; and to the minerals processing industries. Over the past 8 years this work has required a special focus effects on the social and natural environments on behalf of the Governments of the Northern Territory and Australia; to mining companies and to the Northern Territory of Australia's indigenous people.

General Comments

1. A raft of additional legislation associated with mining, oil and gas exploration and production may need to be reviewed to ensure consistency with the Act.
2. The Act does not consider Social Impact and Management Plans. These are essential parts of best practice environmental impact assessments and would be required to meet the aims and objectives of the Act.
 - (a) A “Social Impact Assessment” describes the full range of social, economic and health issues affecting local communities, predicts significant adverse social impacts and sets out proposals for avoiding, mitigating or compensating for adverse effects;
 - (b) A “Social Management Plan” describes how the applicant will implement all recommendations, commitments and obligations to avoid, minimise, ameliorate or compensate for adverse social impacts identified in the relevant social assessment instrument.
3. Provisions should be made to ensure that the Act fully considers the role and value of Strategic Environmental Assessments (SEA) in planning for mitigation of environmental impacts. Although there are elements of this contained within Part IV (Environmental Planning) they should be strengthened at the policy level.
 - (a) SEA are systematic decisions supporting the wider process, which aim to ensure that environmental and possibly other sustainability aspects are considered effectively in policy, planning and programme making.
 - (b) Effective SEA works within a structured and tiered decision framework, aiming to support more effective and efficient decision-making for sustainable development and improved governance by providing for a substantive focus regarding questions, issues and alternatives to be considered. SEA is an evidence-based instrument, aiming to add scientific rigour to policy, planning and programme making, by using suitable assessment methods and techniques.

Planning for Closure

4. The Act does not consider Closure and associated Insurance Plans. These are necessary to ensure that project operators leave the environment in a useable and sustainable manner once their project is complete.
 - (a) For projects such as large mining projects, it is important for the company and the country to plan for closure at the outset of the project and provide for available funds so that the government can undertake this restoration work itself if necessary.
 - (b) It may be more appropriate to include such clauses in the country's mining acts, or oil and gas acts, but if Malawi is not reviewing those currently then it is worthwhile including the requirements in the Environment Management Act.
 - (c) A system of industry specific bonds, in addition to the Environmental Fund envisaged in section 145 should be required under the Act to ensure that the above-mentioned aims can be achieved.
5. The closure plan should explain how the company will rehabilitate the project site and restore it to a useable state. In addition, the government should ensure that the company provides funds well in advance to cover the contingency of the company not complying with these closure obligations, so that the government can draw on these funds if it needs to carry out closure and rehabilitation itself.
6. Some suggested wording is set out below.

Closure obligations

7. (1) *The owner of a project must ensure that the project area is left in condition free of any adverse physical, chemical and biological effects, with no long term adverse environmental risks in the long term.*
8. (2) *An owner shall leave the project area in a condition that facilitates future sustainable land use and ensures that rehabilitation does not become a burden to society after project activities are over.*

9. (3) *An owner's obligations and liabilities shall continue until a closure certificate has been delivered by the Authority, provided that an owner's obligations shall not be limited by the expiration of any license or right nor with the whole or partial suspension, cancellation, revocation, forfeiture, attachment, pledges, relinquishment, surrenders, reduction of area, ceasing of operations, or any other circumstances affecting the status of the right or license or the environmental permit.*

Closure Plan

10. (1) *For large scale projects, as determined by the Authority, the owner shall produce a Closure Plan which shall include all technical and legal measures that need to be implemented by the owner in order to rehabilitate the areas disturbed by its project and to eliminate actual or potential risks to the environment and to public health and safety.*
11. (2) *For small scale projects, as determined by the Authority, the owner shall produce a conceptual closure plan which shall be included in the EIA.*
12. (3) *The areas shall be restored to their pre-project ecological conditions whenever feasible, or otherwise, to an environmental condition appropriate for sustainable alternative uses acceptable to the Board.*
13. (4) *The conceptual closure plan shall include a budget of costs in relation to the closure.*
14. (5) *A detailed Closure Plan shall be submitted for approval by the Board, together with the financial assurance, at least six months before the proposed commencement of the project.*
15. (6) *Existing project owners who do not currently have approved closure plans shall submit a detailed Closure Plan for approval of the Board within six months after this Act enters into force.*
16. (7) *The Closure Plan shall be prepared in accordance with the structure and guidance defined in the Xth Schedule of this Act¹.*

¹ An appropriate schedule should be included for different types of projects – for example, for mining, for oil and gas, etc.

17. (8) *Once approved by the Board, the Closure Plan shall be reviewed and updated every two years and whenever changes in the project make it necessary with all updates submitted for approval of the Board.*

Progressive closure

18. (1) *The Closure Plan shall be implemented in a progressive manner during the life of the project and shall involve a continuous series of activities starting from the initiation of the project.*
19. (2) *Rehabilitation of disturbed areas shall be carried out on an on-going basis, before, during and after the final closure of operations, as it might be required.*
20. (3) *Closure comprises the rehabilitation activities included in the Environmental Management Plan.*

Default of closure obligations

21. (1) *If the owner defaults in the performance of its closure obligations and such default is not caused by an event of force majeure affecting the owner, the Board shall levy a fine on the owner and require it to comply with such obligations within a period of time as the Board considers appropriate.*
22. (2) *Where the infringed closure obligations are not implemented by the end of the term indicated in subsection (1) above, the Board shall execute in full or part, as appropriate, the financial assurance and the Board shall retain a specialized engineering or environmental firm to implement the closure obligations in default, whose costs will be reimbursed by the defaulting owner.*
23. (3) *In the event of a second offence the environmental permit shall be suspended.*
24. (4) *Should the amount of the financial assurance be insufficient to fully implement the closure obligations, the owner shall pay the amount that is required to complete the closure works, to a special financial assurance account managed by the Board.*

25. (5) *The amount indicated in subsection (4) and the reimbursable amounts indicated in subsection (2) above, plus interest, legal costs and any enforcement costs in relation thereto, shall be recoverable by summary judgement if the owner fails to pay such money to the special financial assurance account within the term established by the Board.*

Alternative use of facilities

26. (1) *The local community or the district authority can file a request to the Board for the owner to retain certain facilities after closure, such as roads, buildings, water wells, or other, that can be beneficial to the local community after the termination of the project activities, in which case, the local community or the district authority, as appropriate, shall take the responsibility for the maintenance of such facilities as well as for their closure should it be required.*

27. (2) *The Board, through an authorised officer will communicate its decision by written notice to the community representative or the district authority, as appropriate, within thirty days.*

28. (3) *Should the request be approved, the Board shall indicate the maintenance and closure obligations to be assumed by the local community or the district authority.*

29. (4) *The Board through an authorised officer, shall also notify the related holder of the environmental permit and reduce the financial assurance in the proportionate amount.*

Review and Modification of the Closure Plan

30. (1) *Every two years, or at the request of the Board, the holder of the environmental permit shall present an updated Closure Plan for review by the Board and the closure cost of areas that have been rehabilitated as contemplated in the EMP and the Closure Plan shall be eliminated from the budget, and the financial assurance reduced or increased accordingly.*

31. (2) *The holder of the environmental permit shall submit for consideration by the Board, modifications to the Closure Plan and associated financial*

assurance which are required as a result of the modification of the mining activities.

32. (3) *The Board through an authorised officer will communicate its decision by written notice to the holder of the environmental permit within thirty days of submission of the Closure Plan and associated financial assurance.*

Monitoring and reporting

33. (1) *The Closure Plan shall include a proposed monitoring and reporting programme for the Director General or an authorised officer to control and supervise the execution of closure measures as proposed by the holder of the environmental permit.*
34. (2) *The monitoring programme shall include a minimum of a three-year monitoring and reporting period after final closure in order to verify that the Closure Plan has been successfully implemented and the area has reached physical, chemical and ecological stability.*
35. (3) *The Board can establish a longer monitoring and reporting period if deemed necessary.*

Part I - Definitions

A number of the definitions provided should be strengthened. There are also additional definitions that should be added, as required, should the changes to the Act suggested here, be made.

Environment Impact Assessment:

36. This definition could be strengthened by adding: *“together with proposals for avoiding, mitigation or compensation for adverse effects”*

Environmental audit:

37. This definition could be strengthened by adding: *“the process of examining, documenting and verifying that a mining operation is complying with environmental laws and regulations, as well as with the EIA goals and requirements”*

Environmental management plan

38. The term ‘environmental management plan’ is supposed to be given a meaning under section 36, but section 36 does not deal with an environmental management plan.
39. An Environmental Management Plan should be given the following definition: *“an environmental management plan produced as a result of an environmental impact assessment which shall describe how the applicant will implement all recommendations, commitments and obligations designed to avoid, minimise, ameliorate or compensate for adverse environmental impacts identified in the relevant environmental impact assessment”*
40. This definition could be strengthened by adding: *“together with proposals for avoiding, mitigation or compensation for adverse effects”*

Developer

41. This definition might be redundant. The responsibility to ensure the protection of the environment should be borne by the Owner. Having another person designated could lead to dilution of responsibility.

Local Community

42. This definition could be complemented by: *this local community is within the project's general area of influence and is likely to be affected by the project directly or indirectly*

The following definitions could be added:

Monitoring

43. *“Monitoring” means the establishment of continuous or periodical procedures implemented by the owner, or the Authority, to monitor, measure, sample, record and analyse all environmental and social aspects of mining activities and shall include dynamic mechanisms, such as inspections and audits, where relevant, to verify compliance and progress toward the desired outcomes and such monitoring should be adjusted according to performance experience and feedback;*

Displaced Persons

44. *“Displaced persons” means people living in the project area that must move to another location and the term “displaced persons” can be classified as persons 1) who have formal legal rights to the land they occupy; 2) who do not have formal legal rights to land, but have a claim to land that is recognized or recognizable under the national laws; or 3) who have no recognizable legal right or claim to the land they occupy, and also includes any person experiencing loss of asset, access to income whether of temporary or permanent nature due to the land acquisition process regardless of whether they are physically displaced or relocated or not;*

Project Closure Plan

45. *“Project Closure Plan” means a plan which shall consist of proposals for managing the progressive restoration (where practicable) of worked-out project areas and the ultimate closure and restoration or rehabilitation of the project site upon cessation of working.*

Part II – General Principles

On-going assessment and monitoring

46. Best practice environmental management of projects requires on-going assessment and monitoring, not only at all phases of the projects' operations; but also beyond cessation of the projects.
47. It is recommended that section (3) (2) (1) be expanded to include an assurance that on-going monitoring and assessment of environmental impacts occurs throughout the life of a project; or an additional clause be inserted to reflect this requirement². Note: this may already be covered by or may also need to be inserted into additional, related legislation (e.g. Mining Act or equivalent).

Public participation in environmental management

48. Section 5 could be made much stronger by requiring public participation and consultation with the local communities regarding environmental and social matters. Some legal language is proposed below. However, subsection 5 (2) imposes on the Authority a requirement to establish guidelines and if necessary regulations to ensure public participation. Malawi might decide to put the contents of the following legal language into guidelines (that should be binding) or regulations.

Public participation

49. *(1) All local communities shall have the opportunity to participate in consultations relating to environmental and social matters in accordance and owners shall adhere to the following principles when applying such provisions;*
 - (a) all information provided is transparent and honest;*
 - (b) there is no discrimination on the grounds of race, sex, ethnicity, culture, socioeconomic status or political views;*

² Clause 4 (4) (c) implies that the Authority will have the right to enforce environmental audits and monitoring but does not appear to make this mandatory.

- (c) *cultural diversity, including values, customs, and the traditions of individuals and communities are respected;*
 - (d) *information is communicated in the language most commonly used by the affected parties, in a clear and simple to understand structure;*
 - (e) *local needs and circumstances are taken into consideration;*
 - (f) *all sectors and interests of society are well represented, including women, the elderly and youth;*
 - (g) *there is no discrimination based on any of the grounds contained in international human rights legislation; and*
 - (h) *joint problem solving is promoted through continuous dialogue and local traditions.*
50. (2) *The Authority shall facilitate and encourage public awareness and participation by ensuring that owners make information on the environmental and social impact of proposed and ongoing mining activities widely available.*
51. (3) *The Authority shall, where practicable, make all approved Environmental Impact Assessments, Environmental Management Plans available on the Authority's website.*

Public consultation

52. (1) *Consultation with local communities shall be mandatory from the earliest stages of the project throughout the project operations and closure.*
53. (2) *Public consultation and participation shall observe the following rights of people;*
- (a) *local communities have the right to receive and access public information in a timely and transparent manner;*
 - (b) *local communities have the right to participate responsibly in decision-making processes pertaining to the projects that affect their interests, provided that they shall not pursue any frivolous or vexatious claims;*
 - (c) *local communities have the right to receive copies of the environmental management plan at no cost and the applicant will make efforts to raise awareness within the community about the contents of the plan;*

- (d) *local communities may monitor the implementation of provisions contained in the environmental management plan, provided that such monitoring shall in no way impede the applicant from fulfilling its obligations under this Act; and*
- (e) *local communities have the right to denounce any matter concerning the violation of their civil and human rights.*

54. The Act should consider and include important principles for environmental protection including:

The precautionary principle

55. Best practice decision-making in environmental management normally utilizes the ‘precautionary principle’, so providing a definition of the ‘precautionary principle’ and explicitly stating it within the Act should be considered.
- (a) The precautionary principle or precautionary approach states *if an action or policy has a suspected risk of causing harm to the public or to the environment, in the absence of scientific consensus that the action or policy is harmful, the burden of proof that it is **not** harmful falls on those taking the action.*
 - (b) The principle implies that there is a social responsibility to protect the public from exposure to harm, when scientific investigation has found a plausible risk. These protections can be relaxed only if further scientific findings emerge that provide sound evidence that no harm will result.
 - (c) This principle allows policy makers to use their discretion in making decisions in situations where there is the possibility of harm from taking a particular course or making a certain decision when extensive scientific knowledge on the matter is lacking.
 - (d) Section (3) (2) (j) implies the use of the ‘precautionary principle’. Consideration should be given to rewriting this or inserting an additional clause.

Polluter pays principle

56. *The cost of pollution avoidance, prevention, control, remediation and compensation shall be borne by the polluter.*
57. *For the avoidance of doubt, this principle shall be applicable to any kind of environmental or social impact derived from the development, construction, operation and management of extractive activities.*

General duty to protect the environment and legal responsibility

58. *(1) The owner shall be responsible for the environmental and social impacts of their activities, as well as for managing these impacts.*
59. *(2) Every owner shall carry on its operations in a manner that is reasonably practicable in such a manner as to prevent, minimize, manage and mitigate any adverse environmental impact including but not limited to pollution resulting from such operations and any adverse social impact.*
60. *(3) The owner shall be subject to the legal obligation to keep emissions and effluents resulting from its operations under the maximum level of pollutant concentration permitted by this Law and they shall manage and control residues, wastes, toxic substances and other contaminants in order to ensure that they will not cause adverse effects on the environment and public health.*

General duty to protect communities and those affected by an extractive project

61. *(1) The owner of a mineral right shall respect the surface rights of those within and in close proximity to a project area including:-*
62. *(a) obtaining consent from lawful landowners and occupiers prior to entering lands and commencing exploration or other extractive activities;*
63. *(b) wherever possible, allowing lawful landowners and occupiers to graze livestock and cultivate land;*
64. *(c) paying fair compensation for land use and disturbances; and*
65. *(d) where necessary, provide a resettlement option which is equivalent to or better than their current living environment.*



Access to information

66. *(1) All local communities shall have access to information held by the Authority and the Board concerning the environmental and social effects of proposed or on-going extractive activities.*
67. *(2) The Board will make efforts to raise awareness in communities regarding the existence and content of communities' rights to access information relating to the social, environmental and economic impact of extractive activities.*
68. *(3) The owner shall make all approved Environmental Impact Assessments and Environmental Management Plans available on its official website free of charge.*

Part III – Institutional Arrangements

69. Note that this Part is labeled Part II instead of Part III.

Authority

70. Subsection 7 (3) stipulates that the role of the Authority is to give effect to any policy direction relating to its powers and functions which may be issued to it by *the President*. This gives a lot of direct power to the President, alone, to determine policy direction of the Authority. It may be preferable to require that the directions are given by the President, subject to the approval of Parliament.

The Board

71. Section 8 provides for a Board consisting of seven members appointed by the President (and subject to the approval of the Public Appointments Committee), as well as the Principal Secretary of the responsible Ministry and a Director-General.

(a) it may be useful to require representatives from various Ministries, affected by environmental regulation (for example, those such as the Ministry of the Environment, Ministry of Local Government, Ministry of Mines, Ministry of Agriculture, Ministry of Land, Ministry of Trade, Ministry of Tourism, Ministry of Forestry), to be on the Board such that there is inter-ministerial representation and decision-making in order to mainstream environmental regulation.

(b) It is important that the appointment of the members of the Board is subject to approval from a representative body and they are not nominated by the President alone.

72. Subsection 8 (12) appears to overlap with Subsection 9 (2) and appears to have wording missing (after the dash).

73. Subsection 8 (14) gives power to the President alone to nominate a substitute Director-General. This should be subject to approval of the Public Appointments Committee (as is the appointment of the Director-General) or other body such as Parliament

74. Subsection 8 (15) the remuneration, salaries and allowances of the Board are determined by the President. Again, this should be subject to the approval of Parliament.

Functions of the Authority

75. Some additional functions should be added to make the Authority's role more concrete, including:
- (a) Ensure compliance with EIA procedures and with any environmental impact assessment procedures in the planning and execution of development projects, including compliance in respect of existing projects;
 - (b) Investigate environmental issues and provide advice to the Minister;
 - (c) Issue notices and warnings to such bodies as the Authority may determine, for the purpose of controlling the volume, intensity and quality of noise in the environment;
 - (d) Prescribe standards and guidelines for ambient air, water and soil quality, the pollution of air, water, land and other forms of environmental pollution, including discharge of waste and control of toxic substances;
 - (e) Secure, in collaboration with such persons as it may determine, the control and prevention of discharge of waste into the environment and the protection and improvement of the quality of the environment;
 - (f) Issue environmental permits and pollution abatement notices for controlling the volume, types, constituents and effects of waste discharges, emissions, deposits or other source of pollutants and of substances which are hazardous or potentially dangerous to the quality of the environment or any segment of the environment; and
 - (g) Promote the establishment of national environmental standards.

Technical Committees

76. Eight technical committees are proposed under subsection 17 (2). An additional committee – designated specifically to deal with climate change should also be considered.
77. When considering the terms of reference for each of these committees per subsection 17 (3), attention must be paid to the requirements of associated Acts (e.g. the Mining Act) and the impacts specific to each of the developments being considered.
78. Section 18 considers the composition of technical committees. Decision-making at committee level might be assisted through a guarantee that cross-fertilization of ideas and information between committees occurs. This could be achieved by permitting appropriate individuals to have membership on multiple committees. This may not need to be included as a new subsection in the Act.
79. Subsection 19 establishes a technical committee on biodiversity conservation. This issue of biodiversity conservation is an important one which is being grappled with by countries across Africa, as well as the African Regional Industrial Property Organization (ARIPO). Many countries feel that the issue should be dealt with through standalone legislation, so it may be unusual for Malawi to be dealing with this issue in its Environment Management Act and under the control of the Authority. There should be coordination with other bodies in Malawi looking at this issue, such as the National Commission for Science and Technology.

Part V – Environmental Impact Assessment, Monitoring and Auditing

Project Briefs

80. The project brief should allow high-level decisions to be made with respect to whether projects should be allowed to proceed. Section 30 should therefore be used to screen out proposals that are inconsistent with the objectives of this Act. However, it does not contain an action that allows the Authority to dismiss a proposal that does not meet those objectives prior to ordering an Environmental Impact Assessment. An action permitting the Authority to refuse a proposed project at briefing stage would strengthen the Authority's power and should be inserted.
81. The Act should specify timeframes in which the developer is required to submit the project brief and the Director General is to provide an answer.
82. In subsection 30 (4) the Act outlines the content of a project brief to be submitted to the Authority prior to an Environmental Impact Assessment being undertaken. It is recommended that subsection 30 (4) be expanded to provide a wider raft of information.
83. The information sought should include:
 - (a) A basic introduction that covers the project background, location and provides details with respect to the project developer's technical and financial capacity to undertake and complete the project (as envisaged in subsection 30 (4) (a));
 - (b) A project description that outlines the development overview, timing and components – including workforce, services and infrastructure (as envisaged in subsection 30 (4) (a), (b) and (d));
 - (c) A description of the existing environment - including climate, land systems, geology, surface and groundwater, flora, fauna, air, noise and cultural and socio-economics (as envisaged in subsection 30 (4) (e));
 - (d) A description of the potential impacts on each of the components of the environment identified above (as envisaged in subsection 30 (4) (c)) and how they will be managed;

- (e) A description of the legislation against which the proposed environmental impact assessment will be held and that will impact upon the proposed project; and
 - (f) A description of proposed actions to be undertaken to ensure that effective stakeholder and community consultation and information exchange occurs (not envisaged in subsection 30 (4)).
84. Clear guidelines as to the extent and type of information required in the brief (and suggested above) should be distributed to project developers to ensure an efficient project screening process.

Environmental Impact Assessment Reports

85. The purpose of the environmental impact assessment report is to demonstrate that the company has considered all of the ramifications of its project and has developed adequate and appropriate means of managing and addressing all potential impacts.
86. Best practice in environmental impact assessment (EIA) requires that all available environmental information be assessed in an equitable and detailed manner. This requires the inclusion of local, community and traditionally based ecological, environmental and cultural knowledge.
87. Best practice in EIA also requires that effective stakeholder communication be undertaken. This is not evident within the requirements of subsection 31 (1).
88. It is recommended that additional subsections be inserted to:
- (a) *demonstrate that stakeholder (and especially community) consultations have been undertaken;*
 - (b) *ensure that cultural, social and socio-economic impacts have been considered;*
 - (c) *ensure that local, community or traditional ecological and cultural knowledge have been included in the descriptions pertaining to environmental impacts and their management;*

- (d) the EIA shall contain a chapter outlining the characteristics of the planned activity and the physical development of infrastructure and these features shall be clearly shown on a map of appropriate scale;*
 - (e) A description of the current baseline conditions and likely trends in the absence of the planned development shall be provided;*
 - (f) Impacts shall be described in terms of potential scale, magnitude, significance, for example, major, minor and likely duration, for example, short term, medium term, long term and reversibility or irreversibility;*
 - (g) A Non-Technical Summary written in plain English such that a layman would be able to understand; and*
 - (h) An EIA template could be provided as an Appendix to the Act.*
89. The inclusion of the information recommended above with respect to traditional knowledge will assist in designing an EIA system that is consistent with international best practice and is consistent with the aims and objectives of the United Nations as expressed in the 1992 Declaration on Biodiversity.
90. In the event that the above recommendation is adopted, special mechanisms or systems may need to be developed to ensure that Intellectual Property rights of the communities involved remain protected (as contained within Part VII of the Act).
91. Management plans represent key components of all EIA. Plans provided are often incomplete and require modification as the project proceeds. This makes it difficult to assess their veracity and suitability to the project. It is recommended that the Act be modified to include a mechanism that allows on-going public review or inspection of these plans. This would improve the level of confidence the public and the Authority would place in environmental management of the project.
92. Subsection 31 (1) (j) requires plans to be produced as part of the assessment process, but does not specify a list of plans. To ensure consistency with Part VII of the Act, it is recommended that as a minimum, the environmental

impact assessment report must contain (but not be restricted to) a selection of additional documents from those listed below:

- (a) a plan for management of alien and invasive species;
 - (b) a plan for the conservation of biological diversity;
 - (c) a waste management plan;
 - (d) a groundwater management plan;
 - (e) a surface water management plan;
 - (f) an air quality management plan;
 - (g) a wetland management plan;
 - (h) a greenhouse gas management plan;
 - (i) a stakeholder and stakeholder information management plan;
 - (j) a cultural heritage management plan;
 - (k) a socio-economic management plan;
 - (l) a rehabilitation and closure plan; and
 - (m) a post-closure management plan.
93. The Act should provide a timeframe within which the EIA is approved or refused by the Board of the Authority. This should not be at the sole discretion of an individual (e.g. the Director General).
94. It is recommended that the process of approval and disapproval should be described in further detail to avoid the exercise of discretionary power. The following language is proposed:
95. *(1) The Board may, by simple majority decision, either:*
- (a) Approve the documents and application and request the Director General to grant an environmental licence,*
 - (b) Conclude that there are inadequacies in the assessments and return the application and documents to the applicant with the option of correcting and resubmitting them within X days as described below:*
- (i) Where an EIA, is returned to the applicant by the Board on the basis of inadequacy, the Board shall state its reasons and indicate what steps are required by the applicant to rectify the shortcomings within a period X days*

(ii) In the circumstances outlined in (i) above, the application for an environmental licence shall be held in abeyance until the required corrections have been made and the relevant environmental management plan has been resubmitted.

(iii) In the event that the necessary corrections and additions outlined in (i) above are not addressed and/or the relevant document is not resubmitted within X days, the application for an environmental licence lapses.

(iv) The Board may agree to extend the deadline outlined in (i) to (iii) at its discretion if it is presented with a reasonable case for the extension by the applicant.

96. Providing an opportunity for the public to review supplementary information provided in response to public comment will strengthen the veracity of the environmental impact assessment process.
97. The Act does not make any provision for ensuring that comments obtained during the environmental impact assessment review period have been addressed to the satisfaction of those making the comment. It is recommended that following the issue of supplementary information in response to public comments, that this information be made available for further review.
98. It is recognized that a second public comment period will require additional time and that this may not be agreeable to project developers. If the Act is modified to allow for this, then it is recommended that a period not exceeding two weeks could suffice. An alternative might be to allow for a public hearing where the project developer can explain its responses to the Authority and to its respondents.
99. Most environmental impact assessments are undertaken on an *ad-hoc* or project-by-project basis. This results in environmental assessments being performed without recognition of impacts from other projects in the same location. Consequently, both spatial and temporal cumulative impacts tend to remain unrecognized during the impact assessment and management process.

100. The Act does not make any provision for assessing or managing cumulative impact assessments. It is recommended that a provision for assessment of cumulative impacts as a part of the environmental impact assessment process be included in the Act.

Environmental audits

101. In subsections 39 (2) and (3), the requirements on the owner should be strengthened and described in further details, such as below.
102. *(1) The owner is obliged to prepare an Environmental Management Plan and shall review the contents of such plans on each anniversary of the commencement of works and shall update the plans to accommodate any changes that have occurred in the method of extraction, areas of operation, or other activities that could affect environmental protection and ultimate restoration or rehabilitation of the affected areas.*
103. *(2) An updated Environmental Management Plan shall be submitted simultaneously to the Director General and the Board within one month of the anniversary of the commencement of works.*
104. *(3) The owner shall prepare an annual Environmental Report to be submitted for monitoring purposes simultaneously to the Director of Mines and the Board.*
105. *(4) The annual Environmental Report shall be prepared by the owner or its consultants and the authors of this report shall not subsequently be engaged in any form of independent auditing relating to the same licence area.*
106. *(5) The owner shall widely distribute and disseminate this report amongst the Local Community and submit copies of the same to the Minerals Advisory Board and the Board.*
107. *(6) The owner shall include a schedule of internal sampling and inspection programmes covering all areas of environmental monitoring as an appendix to the Environmental Management Plan.*
108. The Act should require the project developer to present a financial assurance plan for the restoration of the project site after closure; otherwise the

Government will bear the financial cost of the restoration. A section related to financial assurance should be included in Part VI. It is recommended that the following wording be used:

109. **Financial assurance**

110. *(1) The owner should establish itemised costs for the restoration plan including all progressive restoration proposals and costs associated with the Project Closure Plan prior to commencement of work in accordance with the principles contained in the Xth Schedule relating to financial assurance.*

111. *(2) Based on the outline costs which are to be agreed with the Board, the owner shall, prior to commencement of work provide financial assurances to the full value of the restoration, rehabilitation and remedial works contained within the Project Closure plan to the satisfaction of the Board.*

112. *(3) Estimates of costs in (1) above shall be revised annually in the light of practical experience on the site and the level of financial assurance shall be adjusted accordingly*

113. *(4) Acceptable forms of financial assurance include a surety bond, a trust fund with pay-in period, an insurance policy, a cash deposit or annuities, or any combination of these, further details of which are contained in the Xth Schedule*

114. *(5) Where the owner fails to present the financial assurance by the start-up date for the commencement of mining activities as notified by the construction contractor, the environmental licence shall be suspended.*

115. The Act should also be modified to include a separate schedule that provides some standards related to financial assurance. It is suggested that the following might apply:

116. **FINANCIAL ASSURANCE MECHANISM STANDARDS**

117. *The financial assurance mechanism utilised for a specific project shall be comply with the standards defined in this Schedule.*

118. **1. Early scoping of financial feasibility:** *The owner must ensure that the costs associated with mine closure and post closure activities, including post closure care, are included in business feasibility analyses during the planning and design stages. Minimum considerations should include the availability of all necessary funds by appropriate financial instruments to cover the cost of closure at any stage in the mine life, including provision for early or temporary closure. Funds must be set aside early on in the project development to finance the social and economic aspects of mine closure.*
119. **2. Level of financial assurance:** *The required level of financial surety will be established by the Authority taking due regard of the following end goals and rehabilitation standards and in all cases, to enable full reclamation and cover all costs relating to the physical closure of the site. Reclamation shall comprise but is not limited to (i) removal of all plant, equipment, and, where it is no longer needed, infrastructure; (ii) removal of all hazardous materials; (iii) sealing of adits; (iv) stabilization of all surfaces; (v) re-vegetation of all surfaces; (vi) restoration of surface and groundwater flows; (vii) prevention of long-term pollution and (viii) the adverse effects of closure of social assets in the local community, the closure of which can have severe economic consequences.*

In addition, reclamation includes amounts to cover activities provided for in future care, maintenance, reconstruction and emergency response action plans.

The social elements that should be taken in to consideration include redundancy payments, retraining schemes, support for dependent (spin-off) businesses, utilities (electricity, water, communications etc.), social facilities (health, education, justice etc.), infrastructure (roads, airstrips, ports, wharves etc.), food security and the financial system.

In most cases, the amount that is required for the financial surety is based on the specific itemized costs of all components included in the closure or rehabilitation plan. The amount of financial surety shall be established by the applicant and reviewed by the Authority.

120. **3. Timing:** *The financial surety must be in place before work is allowed to start on site. It does not have to be lodged until after the mining title is granted.*
121. **4. Types of funding:** *Acceptable funding instruments include a cash accrual system, bank guarantee or letter of credit, offshore trust fund, insurance policy or surety bond. The two acceptable cash accrual systems are fully funded escrow accounts (including government managed arrangements) or sinking funds.*
122. **5. Accessibility of financial assurance:** *Financial assurances should be readily accessible, dedicated, and only released with the specific consent of the Authority. Forms of financial assurance should be payable to the Authority under its control or in a trust for their benefit and earmarked for reclamation and closure.*
123. **6. Funding provider:** *An acceptable form of financial guarantee must be provided by a reputable financial institution.*

Where a guarantee is provided, in order to assure that guarantors have the financial capacity to assume an operator's risk of not performing its reclamation obligations, the Authority must carefully screen a guarantors' financial health before accepting any form of assurance. Any risk-sharing pools should also be operated on an actuarially sound basis. The Authority should require periodic certification of these criteria by independent third parties.

124. **7. Review of financial assurance:** *The level of financial surety may be reviewed and revised at any time by the Environment Protection Authority.*
125. **8. Release of financial assurance:** *Following the successful total rehabilitation of the site and consultation with the relevant local community, all of the financial surety is returned to the proponent.*

The financial surety funds are not available to the mining permit holder for ongoing rehabilitation.

The funds may be partially released where progressive rehabilitation has been successful and at the time of periodic review. Staged reductions in the level of

financial surety can help to promote progressive rehabilitation and good practices.

Before any money is returned to the mining permit holder, the Authority should establish that the program has been successful and no further work is required on the site. A commonly used method of evaluating the release of the financial surety is the success of the re-vegetation program. It is also possible to use other testing criteria, such as the surface stability, water quality, or a combination of all three.

Depending on the post closure monitoring requirements, as specified in the mine closure plan, the mining title may not be relinquished for a significant period of time during which period, the proponent is responsible for any additional rehabilitation work for residual environmental impacts and social impacts and long term care and maintenance issues. Financial surety is required to support these obligations, either through the original security or by provision of a specific fund. It is released when the Authority has issued a closure certificate, but a portion may be retained to cover latent or residual environmental impacts and social impacts.

126. **9. Public Involvement:** *Since the public runs the risk of bearing the environmental and social costs not covered by an inadequate or prematurely released security, they must be accorded an essential role in advising authorities on the setting and releasing of such security. Therefore, the Authority must give the public notice and an opportunity to comment both before the setting of the financial level of the security and before any decision on whether to release the same.*
127. **10. No Substitute:** *Any type of financial assurance should not be regarded as a surrogate for a permit holder's legal liability for cleanup or for the Authority applying the strictest scrutiny and standards to proposed plans and operations. Rather, a financial assurance is only intended to provide the public with a buffer against having to shoulder costs for which the mining permit holder is liable.*

128. ***11. Primary Authority:*** *The Authority shall act as primary government Authority in all closure matters. This assures the business community that one Authority will take the lead on its problems and that it will not have to answer to many differing opinions on how the success of operation, reclamation, and closure will be measured.*

Environmental standards

129. Environmental standards are necessary measures against which impacts can be assessed and management plans derived. They must adequately protect the health of the natural, social and cultural environments.
130. There are a number of already published documents and standards such as World Health Organization and International Atomic Energy Agency (IAEA) guidelines that are available and should be accessed when considering water, air, and soil quality measures. These documents do not need to be referenced in the Act, but should be published once determined as the appropriate target values.
131. Part VI should provide for an adaptation of standards over time. It is suggested that it might read as follows:
132. *(1) Adjustment to new standards for on-going mining operations shall be agreed by the Board and shall be gradually and progressively undertaken by the owner within a reasonable period of time established by the Board.*
133. *(2) The period of time indicated in subsection (1) shall be determined by the Board on a case by case basis and always in consultation with a relevant industry specialist. Exceptionally, and for only one time, the Board may extend the period indicated in subsection (2) for a term it deems necessary, if the social cost of standards implementation is greater than the overall benefit to the local community.*

Part VIII – Environmental Protection Orders and Environmental Easements

134. In general, more power should be given to officers of the Agency and other enforcement officers (e.g. local police) to enforce protection orders, and there should be fines imposed for obstructing these officers.
135. Under subsection 126 (1) it should be either the Authority or the Board that has the power to issue environmental protection orders, not the Director General alone.
136. Subsection 126 (3) should go before section (2), to make it clear that there is a broad power to issue environmental protection orders. Then, the wording of the current subsection (2) (to become subsection 3) could be amended to read *‘Without limiting the operation of section (2), and notwithstanding the provisions of any other law to the contrary...’*. In addition, there should be a new subsection (a) added to the current subsection (2), to say *‘stop the offending activity’*.
137. Under subsection 126 (7) it should be an officer of the Authority to whom the Director-General may delegate power, rather than ‘any person’.
138. Under Subsection 126 (8) provision should be made for service in the case of a company – at its local office (if it has one in Malawi), or on a local representative (if there is no office in Malawi).
139. Under subsection 130 (1) the words ‘protection orders’ in the first sentence should be ‘easements’
140. Under subsection 130 (3) the words ‘provided that this does not limit the protections provided under this Act’ should be added to the end of this sentence.

Part IX - Pollution control

141. Best practice requires that the samples collected under section 138 of the Act be controlled in the event that they are required for litigation. In addition to the certificate of analysis produced under section 141, the chain of custody of the samples should be demonstrated. This is normally undertaken using a separate control document.



142. Best practice also requires that all certificates of analysis be accompanied by appropriate evidence of quality control. This should be stipulated in section 141 of the Act.
143. It is recommended that analytical and reference laboratories utilised for sample analysis under section 139 be assessed and certified according to external quality control standards.

Part X – Inspection, Analysis and Records

144. This Part could establish a requirement for routine inspections of operations, with wording such as the following:
145. (1) *The Director General or an inspector will establish a routine inspection schedule for every project covered by an environmental permit.*
146. (2) *For all routine inspections the Director General or an inspector will give the environmental permit holder five days' notice of the planned inspection in advance, the inspector shall serve notice to the owner, informing them about the scheduled inspection visit, indicating;-*
- (a) *the name(s) and identification document number of the officer(s) appointed for site visiting;*
- (b) *time schedule indicating date of the visit, and number of days of permanence at site if applicable; and*
- (c) *logistic requirements as applicable.*
147. (3) *The notice referred to in sub-section (2) above shall be delivered by physical delivery or email to the owner, provided that any notification by email shall be deemed to be delivered upon receipt of email confirmation by the inspector.*
148. (4) *The owner shall provide all current address and email contact details to the inspector with its application for an environmental permit and agrees to promptly notify the inspector of any change of address and email notification details and any failure by owner to do the same shall not prevent the Board or any member thereof or inspector, from performing an inspection pursuant to the provisions of this Section.*
149. The current section 137 could apply to random inspections, which should also be permissible under the Act.
150. It may also be worthwhile to include provision for the Authority to carry out independent audits of compliance with EIAs and environmental requirements. An example of some wording is set out below.

Compulsory auditing on behalf of the Authority

151. (1) *The Director General or an authorised officer may arrange for random auditing to be carried out on all environmental permit holders operations in*

order to ensure consistency and transparency in environmental and social monitoring.

152. (2) *The frequency of random auditing will vary with the scale and significance of the project and the level of performance identified through routine sampling, inspection and monitoring by the permit holder.*

Selection of Environmental Auditors and payment of costs

153. (1) *The Board shall implement a competitive and open tender published in the Gazette, for the establishment of a roster of competent environmental auditors who, upon selection by the Board, shall become part of a standing pool of environmental auditors which may be called upon by the Board or the Director General at any time within a 3 year time period for the purposes of conducting routine or specific environmental audits.*
154. (2) *As part of the bidding information advertised by the Board, it shall submit clear requirements of an anticipated framework of work, the required technical competencies and any other specific requirements of the Board at that time relating to the anticipated environmental audit.*
155. (3) *The Board shall require all prospective candidates to submit a schedule of costs for the tendered framework plan, previous experience undertaking similar work advertised by the Board and a list of available technical consultants and their detailed resumes.*
156. (4) *In the event that any challenge raised by the environmental permit holder in relation to the costs of an environmental audit remains unresolved, the environmental permit holder may appeal to the Board, whose decision on any disputed costs shall be final and binding.*
157. (5) *Based on each prospective candidate's cost schedule, technical ability, expertise and taking into account the opinion of the environmental permit holder, the Board shall shortlist a list of competent environmental auditors who will become part of the standing pool of auditors who may be called upon at any time by the Board within a 3 year period to undertake routine or specific environmental audits.*



158. (6) *When the Board requires the services of an environmental auditor for the purposes of the Act, it shall promptly notify those auditors chosen in the standing pool in order to determine their availability to commence work.*
159. (7) *A specific terms of reference for an individual audit will be developed and agreed with the environmental permit holder.*
160. (8) *Auditors will be selected by the Board based on the responses from the standing pool of approved auditors relating to price, expert qualifications and ability to mobilise, provided that those companies or individuals who have been involved or contracted by the environmental permit holder to undertake any work related to environmental or social issues within the previous 12 months shall be excluded from undertaking any auditing work, and any selected auditor will be prohibited from providing services related to the environmental or social issues to the environmental permit holder for six months after the completion and submission of the audit.*

Part XII – Offences

161. As a general comment, all of the fine amounts are very low (for example, the fine for a contravention of the Act, in subsection 156(1), is K1,500,000, or around US \$4700). For a large company, this is not a deterrent and is more like a ‘speeding fine’, which could be taken simply as a cost of business if the company wishes not to comply with the Act. All of these fines should be increased if they are to act as a sufficient deterrent. In addition, there should be the ability to shut down a project in case of contravention, temporarily or permanently in the case of repeated contraventions.

Part XVI – Legal Proceedings

162. While a specialized tribunal may be an effective way of regulating the Act, is there capacity in Malawi for the establishment of such a tribunal? If there is not, this may never happen. It would be worthwhile arranging and ensuring training of judges of Malawi’s court in environmental matters such that in case proceedings are brought before the courts, these judges are able to enforce the Act and any regulations.

Part XV – Miscellaneous

163. In order to ensure that Malawi has the ability under the Act to make regulations on all matters under the Act, we suggest amending the wording of section 178 to read as follows:

164. *The Authority may make regulations, not inconsistent with this Act, for carrying out or giving effect to this Act.*

Schedule 2, section 5 – waste management projects.

165. The Act does not address facilities required for the storage and management of nuclear waste and other materials contaminated by radio-isotopes. It is recommended that this be included into this section of the Act.

Schedule 2, section 6 – energy generation, transmission and storage.

166. Most modern oil and gas projects now utilize a process known as reservoir stimulation (or hydraulic fracturing), which has the potential to contaminate potable water supplies with drilling chemicals and hydrocarbons. It also has the potential to create significant drawdown of groundwater with secondary impacts on agricultural ventures and the natural environment. It is recommended a greater emphasis be placed on protection of water from hydrocarbons. Malawi's Petroleum Act and Regulations should also be revised if necessary to reflect modern exploration procedures.
167. Section 6 does not consider hydrocarbon exploration, drilling and processing facilities. It is recommended that these be included as activities that require some level of environmental impact assessment; and that such direction also be included into Malawi's Petroleum Act.
168. The list of oil and gas projects requiring environment impact assessments contains restrictions that reduce the effectiveness of the intended legislation. For example:
- (a) Section 6 (c) implies that oil and gas pipelines shorter than 1km do not warrant an environmental impact assessment, even though risks to the environment are of the same nature (if not quantity) as those expected for pipelines of length greater than 1km;
 - (b) Section 6 (d) implies that hydrocarbon storage facilities outside of a 3km radius from commercial, industrial and residential areas do not warrant impact assessments. This creates several issues:
 - a. Environmental impacts from oil and gas storage and processing facilities will be identical, irrespective of their distance from population centres;

- b. Hydrocarbon spills from uncontrolled facilities beyond the 3km limit will inevitably impact upon communities if they are not managed and enter surface or groundwater bodies;
 - c. Malawi's remaining ecologically sensitive areas, which require a heightened level of environmental protection, are more likely to be further than 3km from these areas and will be unprotected from the impacts from hydrocarbon developments unless specific legislation to protect them is in place.
169. It is recommended that the restrictions imposed in Section 6 be removed and that oil and gas developments be treated in a manner identical to that for nuclear power developments (Section 6 (e)); i.e. that oil and gas developments and all activities associated with oil and gas development (including service stations) will require environmental impact assessment.