



MINISTRY OF EDUCATION, ZAMBIA

ZEEL RAW MATERIAL AND RESOURCES
ABSTRACTION GUIDANCE DOCUMENT

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1.0 Introduction

The Zambia Enhancing Early Learning (ZEEL) Project is funded by the World Bank (WB) and implemented by the Ministry of Education on behalf of the Zambian Government. The ZEEL project has a nationwide impact with the implementation of activities concentrated in selected districts across all 10 provinces and interventions supporting broader ECE system enhancements. In total, 550 ECE hub and satellite center classrooms will be constructed with additional ECE centers. The Ministry of Education and the Project Implementation Unit (PIU), through the Environmental and Social Specialists, are responsible for ensuring the project follows the legal requirements of the ZEEL Project Environmental and Social Management Framework (ESMF), the WB Environmental and Social Standards (ESSs) and the national laws. The scope of the ZEEL Project (ECE Hub Centre) covers a wide range of subprojects which include:

- ❖ Construction of 1 by 2 classroom block.
- ❖ Drilling of boreholes.
- ❖ Rehabilitation of the old ECE Hubs were necessary.
- ❖ Construction of child-friendly toilets with water connection
- ❖ Construction of sickbays.
- ❖ Construction of kitchen with appropriate safety measures.
- ❖ Installation of water facilities.
- ❖ Construction of office-staff room.
- ❖ Construction of outdoor playground with recommended play materials.
- ❖ Electrification of schools (through grid or solar).

These diverse project activities require raw construction materials in considerable quantities including sand, gravel, and wood. The ESMF did not consider or assess the abstraction of raw materials in any detail and, therefore, there is a requirement to provide further guidance to the Technical Supervisors and the community on the management of environmental and social risks and impacts and provide mitigation measures associated with raw material procurement, abstraction, and management. The size of the sub-projects will determine the quantity of raw materials required, depending on the infrastructural components to be constructed per ECE Hub and Satellite Centre. An estimation of 98.45 tons of river sand is required for each ECE Hub Centre construction.

This guidance document applies to all the Hub Centres and Satellite Centres that will be constructed under the ZEEL Project. The guidance document provided reflects the requirements of the project's ESMF, the WB environmental and social standards, the WB Environmental Health and Safety Guidelines (EHSGs), particularly the EHSGs for construction materials extraction, and where applicable Zambian laws and regulations. The scope of the guidelines is focused on the abstraction of raw materials of any type and quantity with an emphasis on the applicability of ESSs on the abstraction of sand. In the context of sand mining from the riverine environment, excessive instream sand-and-gravel mining causes the degradation of rivers, causes bank erosion, and the deepening of rivers. Excessive riverbed sand abstraction could threaten bridges, riverbanks, and nearby structures. Sand abstraction could also affect the adjoining groundwater system and destroy aquatic and riparian habitats through large changes in the channel morphology. Sand mining generates extra vehicle traffic likely to pose community health and safety risks.

2.0 Aim and Objectives of the Sand Abstraction Guidance Document

This guidance document aims to avoid the unsustainable and illegal extraction of raw materials and resources, avoid irreversible environmental and social risks and impacts, and incorporate the requirements of the relevant WB E&S risk management into screening, E&S due diligence, and implementation of the subprojects.

The objectives:

- ❖ Review the WB ESSs in relation to raw material extraction.
- ❖ Review Zambia's legal instruments in the context of raw material extraction.
- ❖ Guide the application of the E&S risk management in raw material extraction.

3.0 National Legal Framework and WB Environmental and Social Framework

This section assesses the relevant WB environmental and social standards (ESSs) as contained in the Environmental and Social Framework (ESF) to the project, EHSGs, and applicable Zambian legislation as it relates to the sourcing, procurement, and abstraction of raw materials for construction under ZEEL.

3.1 Applicable Zambian Laws and Legislation on Raw Materials Abstraction

Following the provisions and requirements of Zambian laws and regulations, ZEEL Project does not absolve the technical supervisors and the PIC from their responsibility to apply the requirements of the WB ESSs nor the responsibility of the PIU to ensure E&S risk management is considered in all ZEEL project activities. However, there are specific requirements within national law and regulations for licenses, which must be satisfied in parallel with the application of the WB ESSs as indicated in the sections below.

3.1.1 The Environmental Management Act No. 12 of 2011

The Environmental Management Act (EMA) No. 12 of 2011 as read as one with the Environmental (Amendment) Act No. 8 of 2023 Section 29 (1) (1) states a person shall not undertake any project that may have an adverse effect on the environment without the written approval of the Agency, and except following any conditions imposed in that approval. For the construction of the ECE Hubs and satellite Centres, the project has written to the Zambia Environmental Management Agency (ZEMA) seeking consent, guidelines, and conditions that the ZEEL Project needs to comply with. The Zambia Environmental Management Agency will grant environmental protection conditions that will govern the ZEEL Project activities and ensure that the Ministry of Education employs the best available technology (BET) and good environmental practices throughout the project cycle. According to the EMA No. 12 of 2011 (1) under the Preliminary Section, "polluter pays principle" states that the person or institution responsible for pollution or any other damage to the environment shall bear the cost of restoration and cleanup of the affected area to its natural or acceptable state. For the ZEEL Project, where there is a need to extract river sand locally, the community will ensure compliance with the conditions stipulated by restoring and rehabilitating the disturbed land as demonstrated in the Environmental Social Management Plan (ESMP). The project shall also ensure to carry out critical site assessment before any extraction activities are carried out.

3.1.2 The Mine and Minerals Development Act No. 11 of 2015

The Mines and Minerals Development Act in Section 2b categorizes sand as an industrial mineral while the Environmental Protection and Pollution Control (Environmental Impact Assessment) Regulations, S.I No. 28 of 1997 Sub-Regulation 7 (2) (p. 122), defines any activity relating to quarrying and Open Cast Extraction of sand or clay of more than 2 Ha or more as industrial mining. The quantities and land size of sand to be extracted under the ZEEL Project will not exceed more than 100 tons per Hub Centre. In addition, not all ECE Centres being constructed will be required to extract river sand as they are within reach of commercial suppliers. Given that, only Hubs and satellites being constructed in the remotest areas with no legalized sources of raw materials will have to alternatively seek for this resource due to the unavailability of ZEMA-licensed suppliers and quarry pits in the rural areas. The Mines and Minerals Act however does stipulate the threshold of sand that should be extracted during mining but emphasizes the presence of machinery, plants, buildings, premises, erections, and appliances, whether above or below the ground, that are used in connection with the operation or for the extraction, treatment or preparation of any mineral or to dress mineral ores.

The Mines and Minerals (Environment Protection and Pollution Control) (Regulation 15) stipulates the Protection at surface excavation as follows: -

- ❖ A developer who makes, or causes any other person to make, an excavation into which a person or animal may fall, shall make a regular ridge around the boundary of the excavation or take such other measures as are necessary for the safety or health of such person or animal Crack, subsidence or cavity.
- ❖ Where any mining operation has caused or is likely to cause any crack, subsidence, or cavity on the surface in any area, the whole of the area shall be kept fenced or bounded and shall be a caving area and sufficient notices prohibiting unauthorized entry to the area shall be prominently displayed at suitable places along the fence or bounds.
- ❖ No person shall carry out any mining operations likely to cause any crack, subsidence, or cavity on the surface within a horizontal distance of one hundred meters from any building, road, railway, lake, river, or any other structure or feature on the surface requiring protection, unless written permission is obtained from the Director, under such conditions as he may prescribe.

Noted Gaps with the local laws and regulations: -

- ❖ The Zambian Laws and Regulations do not clearly state any direct regulation on the extraction of sand especially on the riverbanks. There is no clear legislation supporting the responsible extraction and consumption of river sand.
- ❖ The laws and regulations do not indicate the time constraint of the sand extractions or quantities since at the sub-project level, the sand demand may be less than the threshold but could be repeated over time.
- ❖ The law is not clear on the requirements of sand mining licenses or permits and threshold quantities at community level use but only at the industrial level.

In view of that, the project wrote to the Director of Mines, in the Ministry of Mines and Minerals Development to seek clearance on the extraction of river sand. This was based on the rationale that the local community will extract river sand where commercial suppliers may not be feasible as the

ZEEL Project is purely a community-based project aimed for community development and national interest through the construction of schools across the country. Clearance was granted (Appendices).

4.0 Relevant World Bank Environmental and Social Standards

The World Bank requires an environmental assessment (EA) of projects proposed for Bank financing to help ensure they are environmentally sound and sustainable. The following World Bank environmental and social standards are relevant to the project as the ZEEL Project Component 1 will involve the construction of Hub Centres (1 by 2 Classroom blocks, Girls and boy's classroom Block, Tank stands, installation of the outdoor playground) that will require the extraction of river sand.

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts

The Project will undertake small-scale construction and renovations that will require the extraction of river sand. According to ESS1, The Project through the specialists is required to undertake an assessment and management of environmental and social risks and impacts of the proposed activities of extraction of river sand. Proposed activities under this component have been screened and the Environmental and Social Management Plan (ESMP) prepared. The ESMP is an instrument that details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts (including those from the procurement and extraction of raw materials) or to reduce them to acceptable levels; and (b) the actions needed to implement these measures. The ESMP will be implemented with this guidance document to ensure appropriate sourcing of raw materials. Before sand extraction is done, site screening should be conducted to identify potential impacts. ESS 1 requires the borrower to adopt a mitigation hierarchy approach to: (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.

ESS 3: Resource Efficiency and Pollution Prevention and Management

The expansion of ECE facilities, construction of the satellite sites and promotion of ECE environment will utilize resources (sand, water, energy) that may lead to typical construction related adverse environmental and social impacts emanating from the construction activities which is likely to lead to pollution and degradation of the bio-physical environment. Resource efficiency in terms of sand, gravel and wood will require the borrower to implement technically and financially feasible measures for improving efficient consumption. The borrower should adopt reuse and recycling of materials. In terms of sand abstracted from a source other than a licensed borrow pit, the appropriate level of E&S due diligence is to be conducted in accordance with section 4.1. The known E&S risks from abstracting sand from the riverine environment are known.

There are environmental risks from unsustainable extraction because the sand budget for a particular source is not known because this requires an understanding of site-specific topographic, hydrologic, and hydraulic information. Unsustainable extraction causes undue erosion or degradation, either at the site or at a nearby location, upstream or downstream, changes the sediment budget and may result in substantial changes in the channel hydraulics. In turn, there are variable effects on aquatic habitat, depending on the magnitude and frequency of the disturbance, mining methods, particle-size characteristics of the sediment, the characteristics of riparian vegetation, and the magnitude and frequency of hydrologic events following the disturbance.

ESS3 also addresses pollution prevention and management. The Borrower will avoid the release of pollutants or, when avoidance is not feasible, minimize and control the concentration and mass flow of their release using the performance levels and measures specified in national law or the EHSs, whichever is most stringent. This applies to the release of pollutants to air, water and land due to routine, non-routine, and accidental circumstances, and with the potential for local, regional, and

transboundary impacts. In the case of sand abstraction from a wet riverbed, sand mining activities, will have an impact upon the river's water quality. Impacts include increased short-term turbidity at the mining site due to resuspension of sediment, sedimentation due to stockpiling and dumping of excess mining materials and organic particulate matter, and oil spills or leakage from excavation machinery and transportation vehicles. Increased riverbed and bank erosion increase suspended solids in the water at the excavation site and downstream. Suspended solids may adversely affect water users and aquatic ecosystems. The impact is particularly significant if water users downstream of the site are abstracting water for domestic use. Suspended solids can significantly increase water treatment costs. These risks should be considered during the screening phase and appropriate E&S impacts and mitigation measures are contained within the ESMP.

The Technical Supervisors and PIC will ensure measures outlined in the ESMP and the Raw Materials Guidance Document are undertaken during the implementation and operation of the project to minimise adverse environmental and social risks and impacts (including those from the procurement and extraction of raw materials).

ESS 4: Community Health and Safety

The standard aims to (a) anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and non-routine circumstances; (b) avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials; (c) have in place effective measures to address emergency events and (d) ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities. Community Health and Safety (CHS) should be addressed in the ESMP related to each specific subproject. The Community safety shall include traffic management near the construction site to prevent accidents by putting up measures to slow down traffic. To ensure vehicles are fitted with reverse signals and employ measures to suppress dust emissions.

ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

Before sand extraction is done, site screening should be conducted to identify potential risks and impacts and any restriction on access to land or use of other resources including communal property and natural resources such as aquatic resources, timber and non-timber forest products. For this project, the legitimacy of the site needs to be ensured in the form of obtaining consent from the local leadership or landowner before sand abstraction.

5.0 Local Guidance

The following information is provided to understand the local context of raw material abstraction including sand abstraction. However, all projects are guided by the requirements of the Constitution of Zambia No. 2 of 2016, Section 159 which mandates local authorities to ensure a safe, clean, and healthy environment in local communities, and the Environmental Management Act which states that all E&S impacts must be mitigated following the risk mitigations as documented in the screening and project site-specific ESMPs. Following the provisions and requirements of Zambian Laws and regulations, The ZEEL Project does not absolve the PIU from its responsibility to apply the requirements of the WB ESSs standards and guidelines as stated in the ESMP nor does the responsibility of the PIU to ensure E&S risk management is considered in all ZEEL activities.

For ZEEL Hub sites, sand requirements will proceed with written consent from ZEMA and the directorate of Mines and Minerals Development, assuming the source of sand is within the site boundaries of the school project, a hill that is susceptible to erosion, or a dry river drainage path traversing through the parent school site. This will need verbal consultation with the village headman or other local community leaders through the Ward Development Committees at the local level, to

verify the sources are outside the school site boundaries such as taking sand from local sand deposits from communally designated areas.

The ES Screening must identify, and the ESMP must address the cumulative issues considering the number of construction site abstracting sand and the locations available to identify risk and mitigation measures applicable to the activity. For example, continuous abstraction of sand from a short stretch of a silted or sandy area will likely require alternative sourcing, e.g., from a ZEMA-approved site source, and thus must be costed as part of planning. The ESMP should include awareness amongst the benefiting community on the required local rehabilitation measures at the community level. ZEEL Project PIU and the World Bank ESS team will verify the extraction and rehabilitation arrangements during field support missions. Abstraction approaches and follow-up rehabilitation requirements will be documented in the project screening forms and the E&S impacts and mitigation measures appropriately assessed and documented in the ESMP.

- (a) **Community-Based Approach Construction Projects.** This is where community workers abstract sand from local silted areas, usually as part of their community contribution without a ZEMA license or from a non-approved ZEMA site but are usually directed by the village head and the local leaders such as the Ward Development Committee should ensure to rehabilitate the excavated sites, if any are formed. The PIC, community workers and the relevant community leaders will be trained by the Technical supervisors or the DPO and DBOs on how to rehabilitate borrow pits caused as a result of the extraction of river sand. The PIC should assess the source to quantify the volume of sand that will be abstracted with minimal impact on the riverine or the riparian zones and apply the mitigation hierarchy. Quantifying the amount of sand excavated will be done by the PIC through the Technical supervisors. The PIC will extract quantities from the material schedule and aggregate them to come up with total required. This can be quantified by calculating the number of truck loads in relation to the tonnage of the vehicle. how much or how many truck loads have been transported to site. Though the cumulative community sand abstraction can be above the maximum threshold, the individual assumed school contribution to the sand requirement for the project can be nonpoint and much less than required. With this rationalization on the ground, the Environmental Management Act, through clearance from the Agency may allow such small community abstractions to proceed without a ZEMA license or mines and Minerals License. Since the required quantity for bulk materials are very minimal in relation to the project scope, the abstraction of sand will have very little effect on the environment.

- (b) **Community-assisted Contractor Works.** This is another small sand abstraction category where the community contributes to the community infrastructure development by putting together some of the materials like sand and stones and a contractor does the actual construction works. In such a scenario, the community abstracts sand without a ZEMA license or permit based on the understanding that the community is deriving value out of the local sand resource as its contribution to the community's infrastructural development. With this view, ZEMA may support the community development aspirations by exempting the community from the related sand abstraction licenses as ZEMA's contribution to community infrastructure development since the licenses are paid for. The PIC with supervision from the district planner and building officer will ensure that the abstraction process does not cause land degradation. Hence, the ESMP and this

guidance document should be implemented together. The PIU will check on rehabilitation works during ESMP review and field support missions. The PIC should conduct sustainable extraction based on limiting volumes to within the natural variability of a river's sediment load.

- (c) **Commercial extraction of sand deposits.** For commercial and material suppliers, EMA requires the development of a detailed extraction and rehabilitation plan as part of the license application process and requires a licensed transporter to load materials from this source. This ensures control of the sand materials at the source and in transit. For the ZEEL Project, this segment applies to the water reticulation sub-projects and provision of solar power or connecting to the solar grid or National Grid, where the project may require a large amount of sand and gravel or may subcontract an independent contractor. In this scenario, the ZEEL project will engage contractors that supply these materials. The ZEEL project does not require a license but engages contractors on condition that they will abstract from a ZEMA-licensed source and will use a ZEMA-licensed sand transporter. The ESMP for the project will be included with the bidding documents and the successful contractor will develop a CESMP. The CESMP will include a rehabilitation plan that takes into account a suitable budget for rehabilitation and transportation costs. The PIU will monitor this process by requesting to review the abstraction licenses at any time and verify abstraction and rehabilitation activities during field support missions. The technical supervisor will also ensure the documentation required to exhibit this compliance status is available for inspection by the PIU.

In addition to what has been guided above, the following measures need to be implemented:

- ❖ Sustainable sources of construction sand must be sought. These sources must be passive, so the extraction does not damage rivers.
- ❖ Sand auditing should be made before sand abstraction to determine the availability of the sand resource. The District Planning officer with the assistance of the District Buildings Officer will audit sources where sand is being abstracted. Sand abstraction will be the responsibility of the community workers, the schools and the community
- ❖ The distance between river mining sites should depend on the width and replenishment rate of the river.
- ❖ Safety zones should be marked when mining in the proximity of infrastructure such as bridges or embankments.
- ❖ Mining should be done during periods of lowest biological activity and attention should be given to spawning seasons and conditions.
- ❖ During extraction, ecological niches should be preserved and protected as far as possible.
- ❖ Selection of appropriate low-impact extraction methods that should result in supporting habitat restoration.
- ❖ A pre- and post-mining baseline survey as well as monitoring of mining activities should be conducted by the PIC, the district planner, and the PIU.
- ❖ Smaller, short-lived extraction sites should be reclaimed immediately.

6.0 Appendices

No. 12 of 2011

Date of Assent: 12th April, 2011

An Act to continue the existence of the Environmental Council and re-name it as the Zambia Environmental Management Agency; provide for integrated environmental management and the protection and conservation of the environment and the sustainable management and use of natural resources; provide for the preparation of the State of the Environment Report, environmental management strategies and other plans for environmental management and sustainable development; provide for the conduct of strategic environmental assessments of proposed policies, plans and programmes likely to have an impact on environmental management; provide for the prevention and control of pollution and environmental degradation; provide for public participation in environmental decision-making and access to environmental information; establish the Environment Fund; provide for environmental audit and monitoring; facilitate the implementation of international environmental agreements and conventions to which Zambia is a party; repeal and replace the Environmental Protection and Pollution Control Act, 1990; and provide for matters connected with, or incidental to, the foregoing.

[15th April, 2011

ENACTED by the Parliament of Zambia.

Insert 1. Extract from the EMA No. 12 of 2011

“polluter pays principle” means the principle that the person or institution responsible for pollution or any other damage to the environment shall bear the cost of restoration and

cleanup of the affected area to its natural or acceptable state;
“pollution” means the presence in the environment of one or more contaminants or pollutants in such quantities and under such conditions as may cause discomfort to, or endanger, the health, safety and welfare of human beings, or which may cause injury or damage to plant or animal life or property, or which may interfere unreasonably with the normal enjoyment of life, the use of property or conduct of business;

Insert 2. Extract from the EMA No. 12 of 2011 (Part 1- Preliminary)

- a. All major roads outside urban areas, the construction of new roads and major improvements over 10 Km in length or over 1 Km in length if the road passes through a National Park or Game Management Area
- b. Railway lines 10 Km away from built up area
- c. Airport and airfields whose runway is 1,800 m or more
- d. Pipelines: for water, diameter 0.5 m and above and length 10 Km outside built up area; for oil, 15 Km or more of which 5 Km or more of their length will be situated in a protected area, a seriously polluted or a water abstraction area
- e. Establishment of or expansion of harbours or pontoon areas

3. Dams, Rivers and Water Resources

- a. Dams and barrages covering a total of 25 Ha or more
- b. Exploration for, and use of, ground water resources including production of geothermal energy: water to be extracted to be more than 2 million cumecs (m³/s)
- c. Water supply - reservoir surface area 50 m² or more

4. Mining: Including Quarrying and Open Cast Extraction

- a. Copper mining, coal site
- b. Limestone, sand, dolomite, phosphate and clay extraction's of 2Ha or more
- c. Precious metals (silver, zinc, cobalt, nickel)
- d. Industrial metals
- e. Gemstones
- f. Radioactive metals

5. Forestry Related Activities

- a. Clearance of forestry in sensitive areas such as watershed areas or for industrial use 50Ha or more
- b. Reforestation and a forestation
- c. Wood processing plants - 1,000 tonnes or more

Insert 3. Extract from the EIA Regulations, SI 28 of 1997

inspect any of the registers maintained or kept under this section and may obtain certified copies of any document contained in the registers.

PART VI

SAFETY, HEALTH AND ENVIRONMENTAL PROTECTION

Consideration of environment and human health when granting mining rights or mineral processing licences

80. (1) The Committee shall, in deciding whether or not to grant any mining right or mineral processing licence, take into account—

(a) the need to conserve and protect—

(i) the air, water, soil, flora, fauna, fish, fisheries and scenic attractions; and

(ii) the features of cultural, architectural, archaeological, historical or geological interests; and

(b) the need to ensure that any mining or mineral processing activity prevents any adverse socio-economic impact or harm to human health, in or on the land over which the right or licence is sought.

(2) The Director of Mines Safety and the Zambia Environmental Management Agency may cause such environmental impact studies and other studies to be carried out as the Director of Mines Safety considers necessary to enable a decision under subsection (1) to be made.

Conditions for protection of environment and human health

81. (1) The conditions subject to which the mining right is granted or renewed shall include such conditions as may be prescribed by the Minister, by statutory instrument, or as the Minister may, in a particular case, otherwise determine, in relation to—

(a) the conservation and protection of—

Insert 4. Extract from the Mines and Regulations Act No. 11 of 2015

“ industrial minerals ” includes a rock or mineral other than gemstones, base metals, energy minerals or precious metals used in their natural state or after physical or chemical transformation, including barites, dolomite, feldspar, fluorspar, graphite, gypsum, ironstone when used as a fluxing agent, kyanite, limestone, phyllite, magnesite, mica, nitrate, phosphate, pyrophyllite, salt, sand, clay, talc, laterite, gravel, potash, potassium minerals, granite, marble, clay, silica, diatomite, kaolin, bentonite or quartz;

“ large-scale exploration ” means exploration over an area covering a minimum of three hundred and one cadastre units and not exceeding fifty-nine thousand eight hundred and eighty cadastre units;

“ large-scale mining ” means mining over an area of a minimum of one hundred and twenty-one cadastre units and not exceeding seven thousand four hundred and eighty-five cadastre units;

Insert 5. from the Mines and Minerals Act section 2b.

Protection at surface excavation

72. A developer who makes, or causes any other person to make, an excavation into which a person or animal may fall, shall make a regular ridge around the boundary of the excavation or take such other measures as are necessary for the safety or health of such person or animal
Crack, subsidence or cavity

73. (1) Where any mining operation has caused or is likely to cause any crack, subsidence or cavity on the surface in any area, the whole of the area shall be kept fenced or bounded and shall be a caving area and sufficient notices prohibiting unauthorised entry to the area shall be prominently displayed at suitable places along the fence or bounds.

(2) No person shall carry out any mining operations likely to cause any crack, subsidence or cavity on the surface within a horizontal distance of one hundred metres from any building, road, railway, lake, river, or any other structure or feature on the surface requiring protection, unless written permission is obtained from the Director, under such conditions as he may prescribe.

(3) No person shall erect or construct a building, power line, road or railway within one hundred metres from the line of break of a caving area, except with the written permission of the Director.

(4) No person shall deposit tailings or other fluid material at any place on the surface of a mine, without the prior approval in writing of the Director.

(5) No person shall enter any caving area, except for the purpose of performing statutory duties.

Danger from spontaneous combustion

75. A dump which may cause spontaneous combustion, shall be situated in such a position that it may not cause fire and shall not-

(a) be a danger to any person;

(b) damage any mine shaft, open pit mine, quarry or building; or

Insert 6 : Mines and Minerals Environmental Protection Regulation

5. The different methods and tools used by the Borrower to carry out the environmental and social assessment and to document the results of such assessment, including the mitigation measures to be implemented, will reflect the nature and scale of the project.¹⁰ As specified in ESS1,¹¹ these will include, as appropriate, a combination of elements of the following:

(a) **Environmental and Social Impact Assessment (ESIA)**

Environmental and social impact assessment (ESIA) is an instrument to identify and assess the potential environmental and social impacts of a proposed project, evaluate alternatives, and design appropriate mitigation, management, and monitoring measures.

¹⁰See ESS1 Section 8.

¹¹These will also reflect national regulatory requirements, which may be relied on by the Borrower to the extent they meet the requirements of the ESS.

¹²See ESS1, paragraph 23.

PROJECT OR ENVIRONMENT WITH IMPACTS FROM OTHER RELEVANT PAST, PRESENT AND REASONABLY FORESEEABLE DEVELOPMENTS AS WELL AS UNPLANNED BUT PREDICTABLE ACTIVITIES ENABLED BY THE PROJECT THAT MAY OCCUR LATER OR AT A DIFFERENT LOCATION.

(e) **Social and Conflict Analysis**

Social and conflict analysis is an instrument that assesses the degree to which the project may (a) exacerbate existing tensions and inequality within society (both within the communities affected by the project and between these communities and others); (b) have a negative effect on stability and human security; (c) be negatively affected by existing tensions, conflict and instability, particularly in circumstances of war, insurrection and civil unrest.

(f) **Environmental and Social Management Plan (ESMP)**

Environmental and social management plan (ESMP) is an instrument that details (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures.

ESS1

23

Extract from The World Bank Environmental and Social Framework

Resource efficiency

5. The Borrower will implement technically and financially feasible measures for improving efficient consumption of energy, water and raw materials, as well as other resources. Such measures will integrate the principles of cleaner production into product design and production processes to conserve raw materials, energy and water, as well as other resources. Where benchmarking data are available, the Borrower will make a comparison to establish the relative level of efficiency.

A. Energy use

9. The Borrower will assess, as part of the environmental and social assessment, the potential cumulative impacts of water use upon communities, other users and the environment and will identify and implement appropriate mitigation measures.

C. Raw material use

10. When the project is a potentially significant user of raw materials, in addition to applying the resource efficiency requirements of this ESS, the Borrower will adopt measures⁴ specified in the EHSs and other GIP to support efficient use of raw materials, to the extent technically and financially feasible.

ESS 3 Extract from The World Bank Environmental and Social Framework

and the informed participation of those affected;

Scope of application

3. The applicability of ESS5 is established during the environmental and social assessment described in ESS1.

4. This ESS applies to permanent or temporary physical and economic displacement resulting from the following types of land acquisition or restrictions on

buffer zones are established in connection with the project;⁹

- (d) Relocation of people without formal, traditional, or recognizable usage rights, who are occupying or utilizing land prior to a project-specific cut-off date;
- (e) Displacement of people as a result of project impacts that render their land unusable or inaccessible;
- (f) Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting and gathering grounds and grazing and cropping areas;

⁹“Replacement cost” is defined as a method of valuation yielding compensation sufficient to replace assets, plus necessary transaction costs associated with asset replacement. Where functioning markets exist, replacement cost is the market value as established through independent and competent real estate val-

ESS5 Extracted from the World Bank Environmental and Social Framework

All correspondence should be addressed to the
Director of Mines
Telephone: +260-1-237306 / 235324 / 5 / 6
Telefax: +260-1-237307/235363
New Government Complex, Nasser Road
E-mail:



In reply please quote:

No:.....

REPUBLIC OF ZAMBIA
MINES DEVELOPMENT DEPARTMENT

8th January 2024

P. O. BOX 31969
LUSAKA


The Permanent Secretary – Educational Services
Ministry of Education
LUSAKA

REF: PERMIT TO EXTRACT RIVER SAND

Reference is made to the above subject matter and your letter dated 3rd January 2024 on minute number MOE101/8/14 in which you were seeking for clearance and permission to extract river sand.

By virtue of this letter, authority is hereby granted to the Ministry of Education to mine sand in selected areas of interest which will be used for the construction of 120 Government Secondary Schools across the 10 Provinces. This is in line with Section 58 of the Mines and Minerals Development Act of 2015 which empowers the Director of Mines to grant such authority for public projects irrespective of when one holds a mining licence or not.

Please be informed accordingly.


for Billy Chewe
Director of Mines

MINES DEVELOPMENT DEPARTMENT

