

Potential Tools and Approaches for the Environmental Assessment of Small, Medium and Large-Scale Mines in Guyana

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Presentation Outline

- Overview of Environmental Assessment
- Status of EIA Process in Guyana
 - Environmental Permitting Process
- Overview of Mining Activities in Guyana
- Key Issues and Concerns - Mining Activities



Presentation Outline (cont'd)

- Options for Enhancing Mining Sector EIA Process
 - Class Screenings
 - Sectoral Environmental Assessment
 - Regional Environmental Assessment
- Overall Capacity Requirements
- A Comparison of Assessment Tools - For Open Discussion...



Overview on the Environmental Impact Assessment (EIA) Process

“Environmental impact assessment (EIA) is a process of identifying, predicting, evaluating, and mitigating the biophysical, social and other relevant effects of proposed projects and physical activities prior to major decisions and commitments being made”.

(International Study of the Effectiveness of Environmental Assessment, 1996, p.13)



Key Steps in the EIA Process

Develop a Study Strategy

Collect Baseline Information

Establish Environmental Context

Describe Project

Identify Issues and Select VECs

Assess Environmental Effects

Report Findings



Key Sections of EIA Report

- **Introduction**
- **Political, Administrative, and Legislative Framework**
- **Environmental Management Framework**
- **Project Description**
- **Environmental Effects Methodology**
(scoping & VEC selection)
- **Existing Biophysical, Socio-Cultural and Economic Environment**
- **Environmental Effects Analysis**
- **Mitigation, Follow-up and Monitoring**
- **Conclusions**



Status of EIA Process in Guyana

- *Environmental Protection Act (1996)*
- Environmental Protection Agency
- Environmental Permitting Process and Permit
- Environmental Assessment Board
- Environmental Appeals Tribunal



EIA Process in Guyana - Environmental Permitting Process (*Simplified Version*)

Project Submitted by Proponent

Project Summary Review by EPA/or Relevant Agency

EIA Required/Consultant Chosen and Approved by EPA

Scope of Work Established

EIA Conducted and Submitted to EPA

EIA Reviewed by EPA and EA Board

Decision made - Permit Granted or Not



Overview of Mining Activities in Guyana

Small Scale

Placer
Sand

Medium Scale

Placer
Sand

Large Scale

Bauxite
Gold
Sand

A few EIAs have been conducted - large and medium scale projects

BUT....SOME WEAKNESSES

Data collection, analysis and quantification of environmental effects, public participation, development of project descriptions and mining plans



Key Issues and Concerns - Mining Activities

- Uncontrolled, unplanned development
- Mine classification not based on size and likely effects
- Cumulative environmental effects not necessarily addressed
- Reclamation, remediation, and monitoring
- Life-of-project environmental management
- Dredging of river banks
- Mercury contamination
- Worker health and safety
- Lack of regulations and enforcement
- Loss of riparian habitat
- Loss of aquatic habitat
- Direct mortality of organic organisms
- water quality environmental effects



Strengthening the EIA Process for the Mining Sector - What Needs to be Done?

- Address environmental effects, including cumulative environmental effects, of small and medium scale mining activities
- Use Madhia Region or similar region as a case study for strengthening EIA process
- Consider other EIA tools and strategies, in addition to project-specific EIAs
- Evaluate feasibility of various EIA tools



Options for Enhancing EIA Process Mining in the Mahdia: a Case Study

- Class Screenings
- Regional Environmental Assessment
- Sectoral Environmental Assessment

*Consideration of cumulative environmental effects
integral to each of these options*



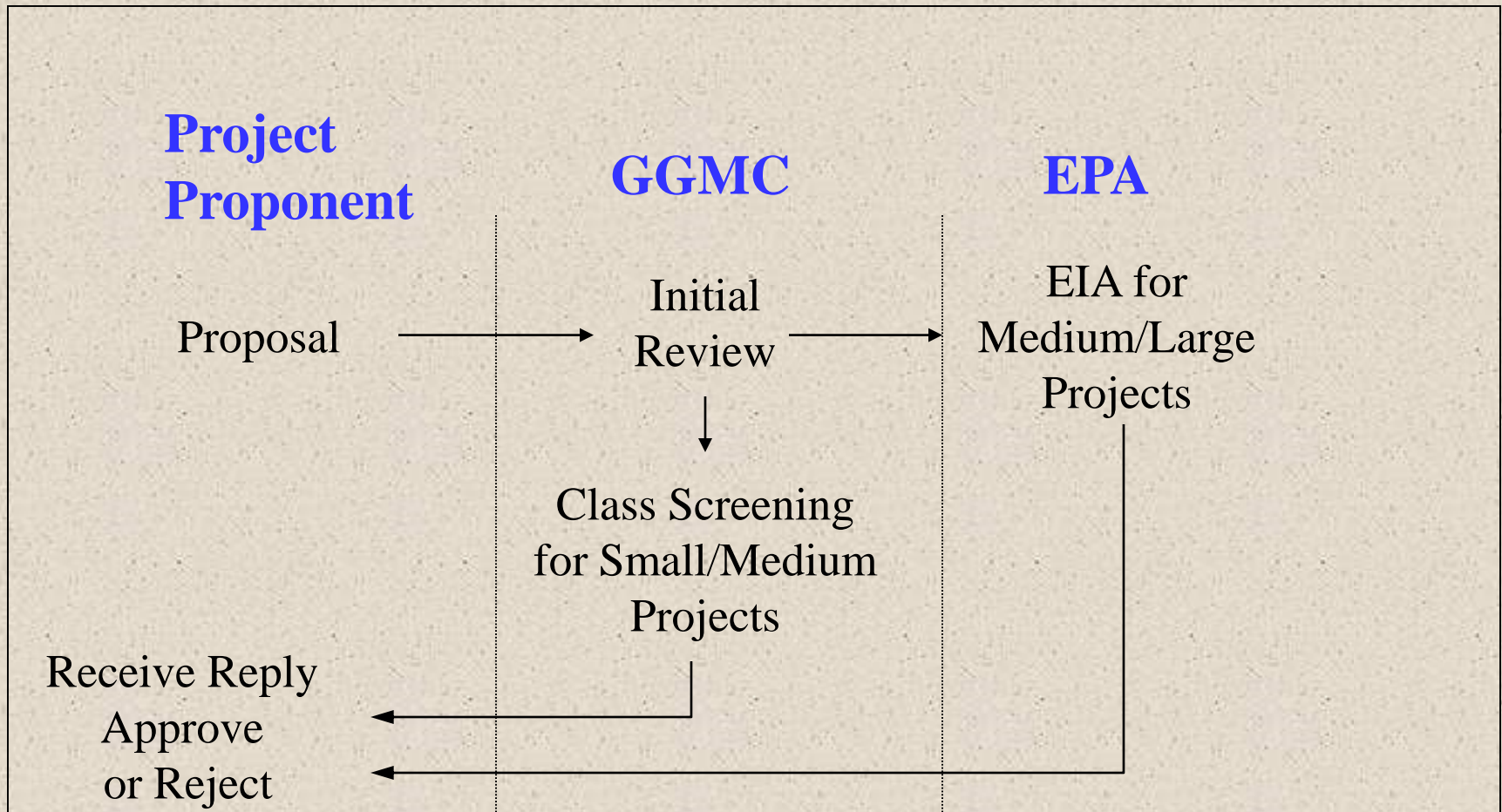
Class Screenings - An Overview

Assessment of similar/routine projects using a standardized screening process in order to simplify and streamline EIA process

- Generic information on:
 - anticipated environmental effects
 - standard mitigation and monitoring procedures
 - biophysical and socio-cultural environment of chosen region
- Assumptions:
 - projects are routine or similar
 - environmental effects are well understood and can be mitigated using known technically and economically feasible methods
 - existing institutional and legislative framework
 - assessors have required skills and knowledge



Class Screenings - Process



Class Screenings - Capacity Needs

- Develop criteria for screening out which projects require an environmental permit (e.g., project “size” or environmental sensitivity)
- Develop and implement standard class screening form (small scale mining projects)
- Develop database from information obtained in screening
- Establish formal liaison between GGMC and EPA
- Enhance skills to evaluate proposed projects using class screening (pilot projects)



Sectoral EIA - An Overview

“Process of examining potential environmental and social implications of all or most of the potential projects proposed for the same sector.”

- Complements project-specific EIA
- Allows for the evaluation of numerous projects in terms of meeting desired sector-specific objectives
- Integrates cumulative environmental effects
- Allows for sector-wide environmental analysis
- Provides a framework for ranking proposed projects
- Requires the collection and organization of data on the sector and identifies data gaps



Sectoral EIA - Criteria for Selection

- Are there major existing environmental problems associated with the sector and/or sector-wide potential environmental effects resulting from a proposed series of projects?
- Is there a clear potential for significant environmental improvements or avoidance of major problems in sector?
- Are there clear policy, regulatory/institutional weaknesses relative to environmental management in this sector?



Sectoral EIA - Outcomes

- Collect and organize baseline data on environmental effects of sector activities as a whole
- Identify need sector-specific legislative requirements and sector policies, standards and codes
- Identify need for technology and training
- Establish ranking system for investment priorities



Sectoral EIA - Capacity Needs

- Coordinate effort between GGMC, EPA and others
- Establish TOR for Sectoral EIA of the mining sector
- Establish sector-specific development objectives
- Integrate information obtained from class screenings



Regional EIA - An Overview

“Process of determining the regional, cumulative environmental and social implications of multi-sectoral developments within a defined geographic region”.

- Emphasis on resource allocation between competing uses (planning tool) to ensure sustainability
- Allows for examination of cumulative environmental effects
- Requires collaboration of numerous agencies and organizations with broader mandates
- Takes into account the opportunities and the limitations represented by the environment of a region
- Addresses issues and environmental effects on a distinct spatial setting



Regional EIA - Outcomes

- Collect baseline information on the Mahdia Region or other similar regions (*i.e.*, to help establish carrying capacity limits)
- Establish regional development plan
- Develop comprehensive and complementary legislation
- Identify need for technology and training



Regional EIA - Capacity Needs

- Coordinate effort between GGMC, EPA, National Land Use Committee and other relevant departments
- Establish TOR for Regional EIA of the Madhia or other similar region
- Establish development objectives for the Mahdia or other similar region
- Integrate information obtained from class screenings



Summary of EIA Capacity Needs

- Provide EIA training and practical experience
- Establish cooperative effort between GGMC, EPA and other departments and organizations (*University, NGOs*)
- Collect baseline information on the Madhia or other similar region(s) (*build upon existing data*)
- Evaluate environmental effects of existing mining practices
- Strengthen decision-making capacity in EIA (development of TORs, scoping, screening checklist)



Summary of EIA Capacity Needs (cont'd)

- Develop mining regulations and strengthen enforcement capabilities
- Develop complementary legislation and policy across and within sectors
- Provide examples of comprehensive mining-related EIAs as reference material (e.g., sample project descriptions, EMS)
- Develop codes of practice



A Comparison of Assessment Tools For Small and Medium Scale Mines- (Starting Point For Open Discussion...)

Aspects	Project EIA	Class EIA	Sectoral EIA	Regional EIA
Cost	L	M	H	H
Training	H	M	M	H
Development institutional and legislative framework	H	M	M	H
Existing EIA in-country expertise	L	L	L	L
Cross-sector cooperation required	L	M	M	H
Baseline data availability	L	L	L	L
Overall Feasibility	L	H	M	L

