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**SESSION 12: ENVIRONMENTAL IMPACT  
ASSESSMENT (EIA) FOR ASM- LSM**



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# Artisanal & Small Scale Mining in Ghana





# PRESENTATION OUTLINE

- ASM in the Ghanaian Context
- Legal Framework
- Environmental Assessment (ASM/ LSM)
  - Requirements & Process
- Key impacts
- Challenges
- Strategies in place
- Way forward

# CATEGORIZATION OF ASM

- **Some criteria used in categorizing ASM in Ghana include;**
  - size of concession i.e.  $\leq 25$  acres
  - duration of environmental permit (2 years) and duration of mining license (5 years)
  - Ownership (Ghanaians, 18+ years)

# ASM IN THE GHANAIAIAN CONTEXT

- Ghana (previously the Gold Coast) has a long history of ASM dating as far back as 1,000 years
- ASM predates the era of modern exploration and mining methods
- From 1910 upwards, various legislations limited or prohibited ASM until the Small Scale Gold Mining Law in 1989 (PNDCL 218).
- Mineralization/ Scope of ASM activity is countrywide (8 out of 10 regions in Ghana for gold)
- Ghana is one of **top** gold producing countries in world and **second** on the continent

# ASM IN THE GHANAIAIAN CONTEXT- CONT'D

- ASM contribution to total gold production ( $\frac{1}{3} \approx 1.2\text{Moz}$  in 2016) (Source: Minerals Commission)
- Employs <1,000,000 people (up to 50% women???), child labour in illegal ASM/ “galamsey”???
- Deposit types:
  - **Hard rock:** Occurring within the greenstone belts (Birimian & Tarkwaian) and usually embedded in host rock; employing underground methods eg Shafts/ tunnels
  - **Alluvial:** Occurring along the paleo-placer terraces of rivers and usually occurring as free gold; employing surface mining methods eg strip mining and even dredging
- Infiltration by foreigners (from West Africa, Europe & Asia)
- Mechanization

# LEGAL FRAMEWORK

- The Constitution of the Republic of Ghana (1992)
- **Environmental Protection Agency Act, 1990 (Act 490)**
- **Environmental Assessment Regulations, 1999 (LI 1652)**
- The Mercury Act, 1989 (PNDC L 217 )
- Minerals and Mining Act, 2006 (Act 703)
- Minerals and Mining Regulations, 2012
  - General (LI 2173), Support Services (LI 2174), Compensation & Resettlement (LI 2175), Licensing (LI 2176), Explosives (LI 2177), Health, Safety & Technical (LI 2182)
- Water Resources Act, 1996 (Act 522)
- Water Use Regulations, 2001 (LI 1692); amongst others

# ESTABLISHMENT OF EPA

- In 1974, the Environmental Protection Council (EPC) of Ghana was established after the Stockholm Conference on Human Environment in 1972.
- The EPC was mainly an **advisory** organization with **no enforcement power** to ensure compliance.
- In March 1988, through the preparation of the National Environmental Action Plan (NEAP), environmental issues were prioritized and recommendations made for the restructuring of the EPC to equip it with the required **legal backing** as well as the requisite **enforcement powers**.
- The Environmental Protection Agency was established by the Environmental Protection Agency Act, 1994 (Act 490) **as the lead Agency** for Environmental Protection in Ghana mandated to **oversee, coordinate** and **regulate all issues** regarding the environment.



# Environmental Assessment Procedures, 1995



- **Formal Procedures introduced in June 1995**

- **Contain a logical step-wise EA system with provisions for:**

- **Registration**
- **Screening**
- **Scoping**
- **EIA Study**
- **Review & Public Hearing**
- **Appeals**
- **Timelines for decision-making**
- **Public Participation at all levels of the process**
- **Fees**
- **Follow-ups**

# Environmental Assessment Regulations, 1999 (LI 1652)

- Provides the necessary legal backing for the EIA procedure/system in Ghana
- Generally, it deals with the various procedures to be followed prior to the granting of environmental permits, during the project life cycle and procedures for filing complaints, offences and penalties etc
- Has three (3) distinct parts
  - With a total of 30 regulations and
  - Five (5) schedules

# LI 1652



## Part 1

**Process of Obtaining Environmental Permit**

## Part 2

**Environmental Assessment Reports and Prescribed Actions by the Agency**

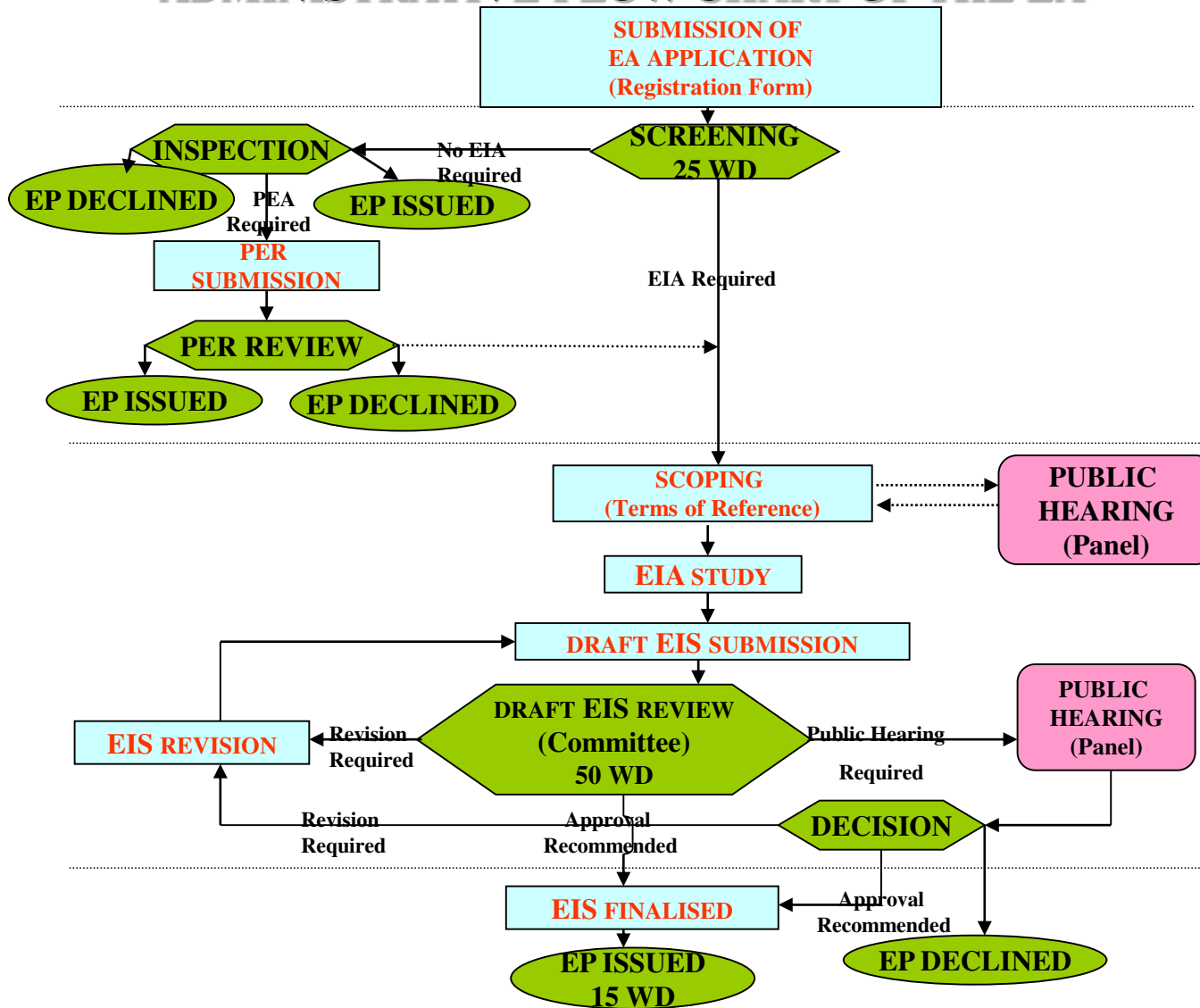
## Part 3

**Miscellaneous provisions - suspension, cancellation or revocation of permits and certificates, complaints by aggrieved persons, gazette publication, offences and penalty, interpretation and schedules**

# SCHEDULES TO EA REGULATIONS, 1999 (LI 1652)

- Schedule 1, lists undertakings requiring registration and environment permit (**ASM**).
- Schedule 2, lists undertakings for which EIA is mandatory (**LSM**).
- Schedule 3, **Regulation 15 (2)** EIA Scoping Notice
- Schedule 4, **Regulation 16 (3)** EIA Notice
- Schedule 5, **Regulation 30 (2)** provides list of twelve (12) Environmentally sensitive areas

# ADMINISTRATIVE FLOW CHART OF THE EA



EIA - ENVIRONMENTAL IMPACT ASSESSMENT  
 EIS - ENVIRONMENTAL IMPACT STATEMENT  
 PER - PRELIMINARY ENVIRONMENTAL REPORT  
 PEA - PRELIMINARY ENVIRONMENTAL ASSESSMENT  
 PH - PUBLIC HEARING  
 WD - WORKING DAYS REQUIRED FOR REVIEW

EA - ENVIRONMENTAL ASSESSMENT  
 EP - ENVIRONMENTAL PERMIT

EPA Action  
 Proponent Action  
 Public

# REQUIREMENTS OF ASM APPLICATIONS (**NO EIA**)

- **Completion** of Environmental Overview for Small and Medium Scale Mining **Form SMMI 1**
- **Receipt of all relevant attachments** (Site Plan; brief description of operational methods (mining and or processing); Costed reclamation and abandonment proposals; 21 Day Notice of Publication from relevant Local Government Assembly)
- **Screening** (location, size, output, technology, land use, public concerns, sensitivity of area, etc)- *Reg. 5 of LI 1652*
- **Review** of all information and documentation
- **Decision making** (approval; decline; or request for the submission of a **Preliminary Environmental Report (PER)**)
- Preparation of a **Schedule to Environmental Permit**
- **Compliance enforcement monitoring**

# KEY IMPACTS

- **Water pollution:** siltation, turbidity, chemical pollution (Hg, CN, Hydrocarbons)
- **Diversion of river/ stream channels:** Flooding
- **Land degradation:** destruction of farmlands, creation of pits, scarred landscapes, chemical contamination of soils and improper containment of tailings
- **Air pollution:** from dust and burning of the mercury amalgam

# CHALLENGES OF ASM

- Mechanization of ASM
- Insufficient geological studies on concessions
- Lack of qualified mine personnel (best practice)
- Issue of “reclamation bonds” (absent & arbitrary)
- Lack of reporting (Annual Environmental Reports or Environmental Management Plans)
- Institutional challenges
- Mercury use- legal in ASM (**Ghana is 40<sup>th</sup> party to the Minamata Convention** )
- Illegal ASM/ “Galamsey”



# STRATEGIES ADOPTED BY THE AGENCY

- **Creation of 17 new Area Offices** (9 of which are in mining hotspots)
- **Draft** checklist developed for ASM
- **Complete decentralization- ASM permitting process**
- **Joint training** (EPA, Minerals Commission & ASM Operators) with the University of Mines & Technology
- **Increasing public awareness**
- **Complaints investigations** (plus creation of Client Services)

# WAY FORWARD

- Re- categorization of ASM
- Spatial demarcation and gazette of environmentally sensitive areas (***Listed in Schedule 5 of LI 1652***)
- Undertake Strategic Environmental Assessments (SEAs) of areas blocked out for ASM
- Posting of reclamation bonds by ASM operators
- Centralized processing centers
- New approaches in monitoring
  - the use of technology (drones) and satellite imagery
  - inclusion of a wider range of stakeholders at the local government level

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