Health Impact Assessment in Extractive Industries within Ghana

Dr Edith Clarke
Program Manager, Occupational & Environmental Health Unit,
Ghana Health Service / Ministry of Health

April 2010
Introduction

Extractive Industries in Ghana:
• Over 100 years of mining in Ghana: gold, diamonds, bauxite, salt, sand winning
• Exploitation in formal sector done mainly by multinational companies
• Recent policies & legislation on small scale mining
• Existence of large pool of artisanal informal sector miners: ‘Galamsey’ operatives
• Recent oil find fuelling development of oil & gas sector: Floating Production Storage & Offloading (FPSO) unit under construction & due to start drilling offshore in November 2010
Key Issues

• How has HIA been used in the mining sector?
• How has the health sector been involved in HIA?
• Entry points for HIA
• Challenges & Opportunities
How has HIA been used in mining sector?

(I)

I. Legislation:

A. Mining Regulations 1970?: Not much provision on HIA.

- Health issues covered border on provision of sanitary facilities in mines & provision of medical care for injured
- No formal requirement from health sector on HIAs

B. Environmental Assessment Regulations, 1999 LI 1652: makes some provision for ‘protection of human health & environment’
Environmental Assessment Regulations

• Part 1 Section 1(2): No commencement of activities in respect of undertaking likely to have adverse effect on environment or public health unless ....environmental permit issued by EPA

• Part 1 Section 5(2): Screening: ...Applicant shall submit report indicating:

a) ‘environmental, health & safety impact of undertaking’

c) ‘Clear commitment to address unavoidable environmental and health impacts & steps... for their reduction’
How has HIA been applied in mining sector? (II)

C. HIA in Environmental Assessments: The Practice

i. Earlier reviews (late 1990s under EPA) : revealed paucity of health-related & OSH considerations in environmental impact statements

ii. UNIDO sponsored study on impact of mercury on artisanal miners (2003) : Body burden below reference levels

iii. Socio-economic and health survey component of the EIA/SEA study under Mining Sector Support (auspices of Minerals Commission; EU sponsored) Project (2005-2008)

Methods: Interviews, FGDs, health records review, biological monitoring
Findings of MSSP-Health Component

A. Community perceptions
   • Various types of ill-health attributed by communities to mining activities eg blasting of rocks causing strokes, & whooping cough & diarrhoeal diseases from the dust.
   • In most cases not possible to confirm assertion as direct impact of mining: due to absence of baseline information preceding mining, limitations in use of public health facility data for monitoring (incompleteness, health seeking behaviours etc)

B. Biological Monitoring:
   • However study was able to draw associations between human body burden of Heavy metal Arsenic & contamination of river sediments & fish:
     - study proposed follow-up work & mitigation measures
## Arsenic Screening results in Obuasi area

<table>
<thead>
<tr>
<th>Location</th>
<th>Mean result</th>
<th>Max result</th>
<th>Min result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wiaso</td>
<td>1.59</td>
<td>3.79</td>
<td>0.46</td>
</tr>
<tr>
<td>Dokyiwa</td>
<td>16.94</td>
<td>63.60</td>
<td>2.92</td>
</tr>
<tr>
<td>Kwabrafoso</td>
<td>22.66</td>
<td>114.00</td>
<td>1.39</td>
</tr>
</tbody>
</table>
HIA in mining sector II

C. Health System Issues:

- Inadequate collaboration between health facilities run by mining companies and the local health authorities: lack of clear policy guidelines for engaging with each other, no legal requirement for disclosure of data eg Newmont’s baseline study, etc.

- Mining companies develop community health interventions without much collaboration with local health authorities and not integrated into the short and long term plans of the local authorities.

- Health sector has not been pro-active in engaging mining sector.
HIA in mining sector III

• Examples of improved collaboration:
  ➢ Anglogold Ashanti’s malaria control program in Obuasi. But

• Not integrated into NMCP Hence raises issue of long term sustainability
  ➢ Ghana Manganese Company participatory approach to total community involvement
  ➢ Newmont’s attempt to involve H sector in community health initiatives
HIA in Oil & Gas sector

- Community perceptions: High Expectations (JOB CREATION!) vrs Apprehension (INTERFERENCE WITH FISHING,)

- If ramifications are not well investigated & managed, likely to lead to serious health consequences eg
  
  i. reduced fish catches increasing poverty
  ii. Shift from agriculture to other sectors posing threats to food security:

  - increasing malnutrition in children under 5yrs in Vulnerable region
  - 27% under-nutrition (national average avg 14%) in W.Region: 1 of 2 regions with highest rates of severe anaemia (11-12%)

  - Influx of labour: Human settlement impacts incl. overstretched social services eg water & sanitation, slum creation, increasing risk of communicable diseases, injuries from RTAs, crime etc

  - Prostitution with increase in STIs & HIV/AIDS

  - Health Systems: ? Ability of health service infrastructure and personnel (numbers & specialties) to cope with increased burden of ill health
HIA in Oil & Gas Sector to date

- Tullow Oil EIA (Exploration) : Environmental permit granted
- SEA of oil and gas sector: Scoping report completed & recent stakeholder meeting
- Limited consideration of health issues: HIV prominent
- Health sector involvement: So far limited to participation in SEA stakeholder meeting.
  - MOH/GHS / WHO emphasized the need for greater focus on health systems & more holistic assessment of impacts
Opportunities (I)

• Country missed out by not adequately integrating key health issues in mining from onset.

• For Oil & Gas sector: Opportunities exist for managing anticipated health challenges through:

  i. Reinforcing importance of public health mandate within EIA Regulations: via inclusion of holistic HIA in the SEA & EIAs being conducted on the Jubilee Field etc

  ii. Country’s environment & health sectors have signed on to Libreville Declaration

  iii. Health can provide important links to important development goals eg MDGs: poverty, environment, women empowerment
Opportunities (II)

iv. Strengthening of health systems: through a ‘health in all policies’ approach within extractive industry sector will

- facilitate health sector’s anticipation of increasing demands to be made on it and

- enable it together with extractive industry sector to plan ahead for human & material resources

- facilitate early introduction of preventive or corrective actions

- facilitate engagement with local communities
Opportunities (III)

v. On-going Monitoring

a) Using health as entry point to demonstrate impacts not easily identified from environment or social viewpoint by means of readily verifiable indicators: eg
- Reduction in respiratory ill-health following envisaged shift from use of fossil fuels to LPG gas
- Early Identification, & management of disease outbreaks resulting from inadequate sanitation facilities

b) Expansion of scope of mechanisms in place by some lending institutions for monitoring community concerns & effects of undertakings to more fully incorporate health issues, in collaboration with state agencies (eg the World Bank Review Inspection Panel)
Challenges

• Health & environment sectors’ understanding of the process & willingness to forge a new & closer relationship

• Maintaining participatory approach as broadly as possible, essential in ensuring the sustainability of projects

• Generation of primary data locally to complement existing routine data sources

• Application of sustainable HIA procedures occasioned by small scale and informal economy where considerable proportion of operatives eg in mining are found
Conclusion

• Not much advantage taken yet of HIA as a tool for sustainable development in extractive industry sector

• HIA offers immense potential for positively impacting health and socio-economic development

• Need for Ghana to explore opportunities for evolving HIA system while learning from experiences of other countries