



e WORKING WEEK 2021 20-25 JUNE

SMART SURVEYORS FOR LAND
AND WATER MANAGEMENT

CHALLENGES IN A NEW REALITY

Waste Management and Urban Sanitation Challenges in the Mining Communities of Tarkwa, Ghana— Opportunities for Private Sector Participation

Presented by

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OUTLINE OF PRESENTATION

- ❖ **Introduction**
- ❖ **Study Area**
- ❖ **Materials/Methods**
- ❖ **Results/Discussions**
- ❖ **Conclusions/Recommendations**

INTRODUCTION

- ❖ **Some Mining Communities like PHMA are experiencing rapid urbanization and associated waste disposal and sanitation problems (among others).**
- ❖ **Surface waters are polluted by mining (galamsey).**
- ❖ **Waste disposal situation adding to threats of ground-water pollution, public health safety and sustainability problems for such growing mining communities.**
- ❖ **State/Public Agencies unable to handle situation alone. Inadequate funding and logistics. No Sorting, Recycling and Engineered Landfilling. Waste collection is about 40% with 60% left piling up within communities.**
- ❖ **Focus of Presentation is to give **overview of situation** on ground and **invite Private Sector** (local and international) **to explore for investment and offering support.****

STUDY AREA

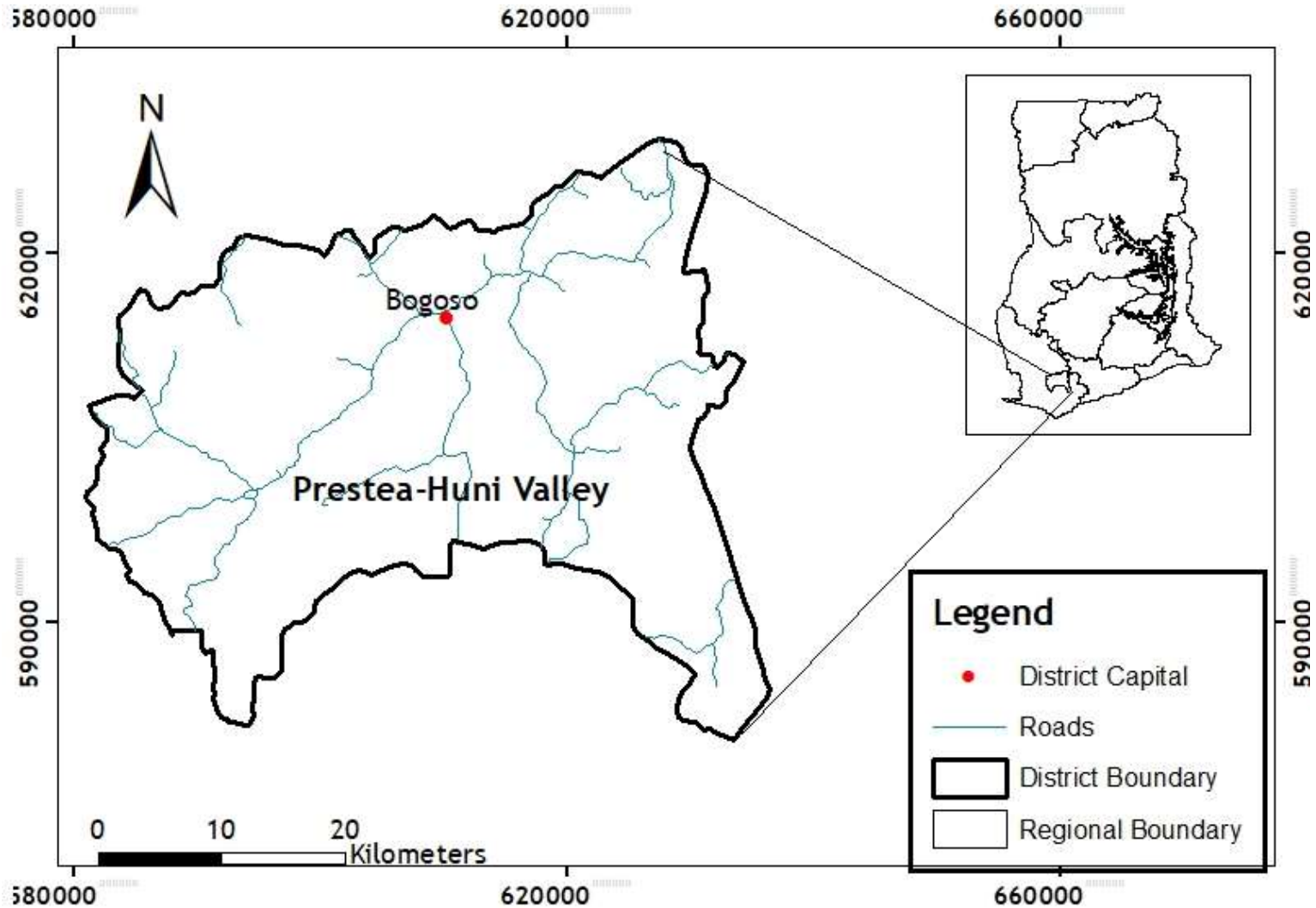


Fig 1 Map Showing Location of Study Area (PHMA) within Ghana

D. MATERIALS AND METHODS

- ❖ **Field materials:-** hand-held GPS receivers, tapes, field books, digital cameras and interviews.
- ❖ **Office materials:-** computers, scanners, printers, etc.
- ❖ **Software:-** microsoft office suite, photoshop CS4, ArcGIS.
- ❖ **Data:-** coordinates of waste dumps, town layout plans, topographic maps, field photos and extracts from interviews and other observational records.
- ❖ **Methods:-** review of relevant literature and documents, interviews and discussions with relevant stakeholders, field visits and observations, construction of cartographic database, generation and analysis of Landfill (Waste dump) maps, waste materials, etc..

RESULTS/DISCUSSIONS (Cont')

Table 1 Sample of the Point and Attribute Data on Waste Dump Sites

Location/ Area	Coordinates (m)		Remarks/Attributes
	Eastern	Northern	
Boga Street	608973	615773	Road Accessible, with collection containers services ; within town, Good maintenance and sanitation conditions
Town Council Park	608931	615331	Road Accessible, no collection containers ; within town, low maintenance and sanitation conditions, close to public latrine
Hassankrom	610160	615466	Road Accessible, no collection containers ; within town, poor maintenance and sanitation conditions, very close to residential houses
Tuobodom	595095	600355	Large wastedump; road accessible, no collection containers ; within town, low maintenance and sanitation conditions, close to houses
Heman Akromato	596180	602535	Road Accessible, no collection containers ; outskirts of town, poor maintenance and sanitation conditions; near to buildings
Gyantekrom	617060	593045	Community Wastedump, no collection containers ; poor maintenance and sanitation conditions
Compound-Kesse	616557	592947	Community Wastedump with Container services by PHMA but stays overfilled for weeks; low maintenance and sanitation conditions
Nzemafookrom	616232	592551	Community Wastedump, no collection and Container Services, poor maintenance and sanitation conditions
Market Area	625951	609379	Road Accessible, no collection containers ; near main market within town, fair maintenance and sanitation conditions
Ntiakokrom	625439	609890	Road Accessible, no collection containers ; within town, low maintenance and sanitation conditions
Fante New Town	619524	605071	Road Accessible, no collection containers ; outskirts of town, poor maintenance and sanitation conditions
Bosomtwe Jhs	620559	604169	Road Accessible, no collection containers ; near to school, low maintenance and sanitation conditions

RESULTS/DISCUSSIONS (Cont')



Fig. 2a Example of Waste Dump Sites Situation in Study Area

RESULTS/DISCUSSIONS (Cont')



Fig. 2b Examples of Recoverable Materials from Waste Dumps in Study Area

RESULTS/DISCUSSIONS (Cont')

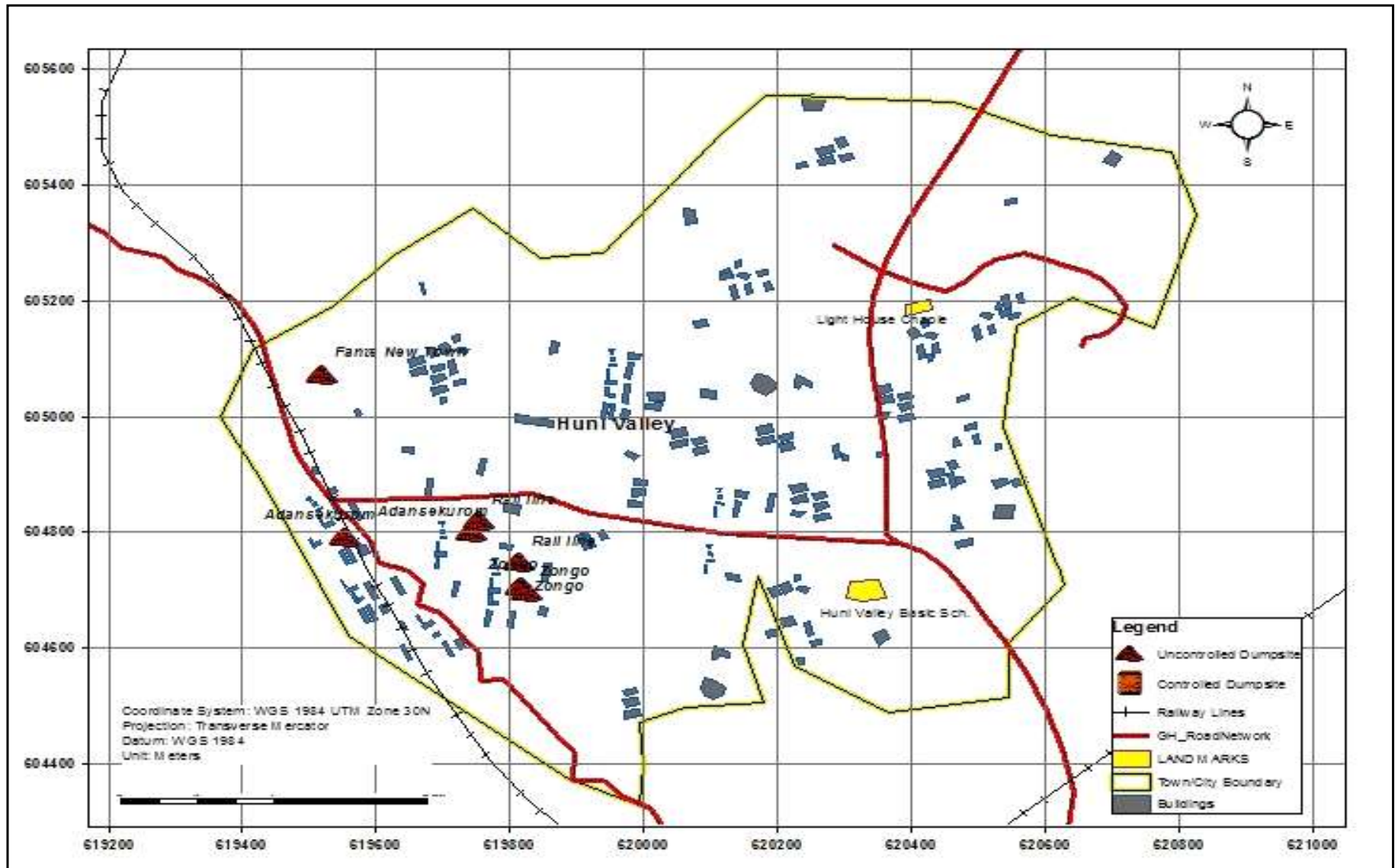
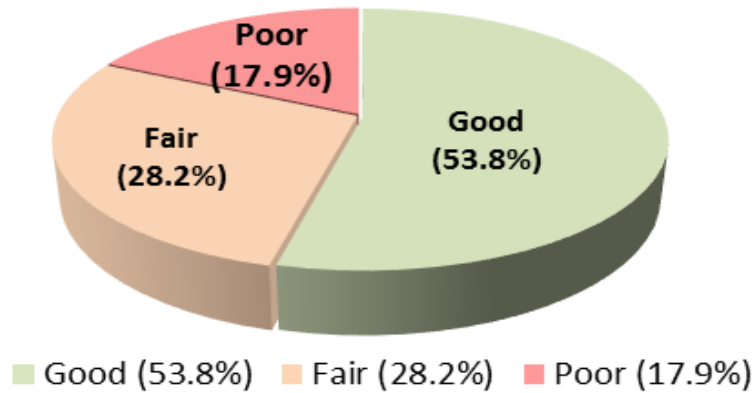


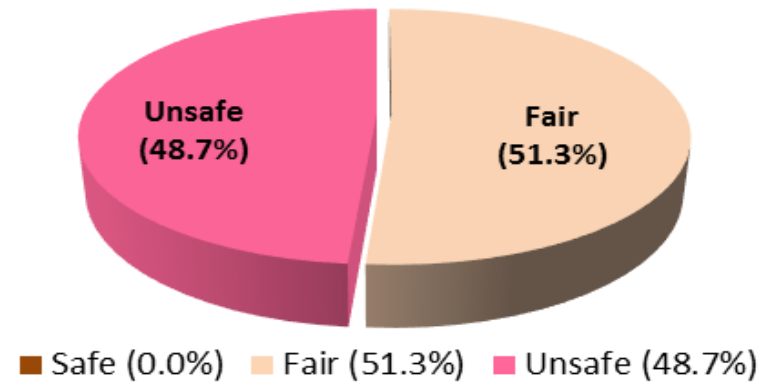
Fig. 3 Example of Waste Dumps Distribution Maps in Study Area (PHMA)

RESULTS/DISCUSSIONS (Cont')

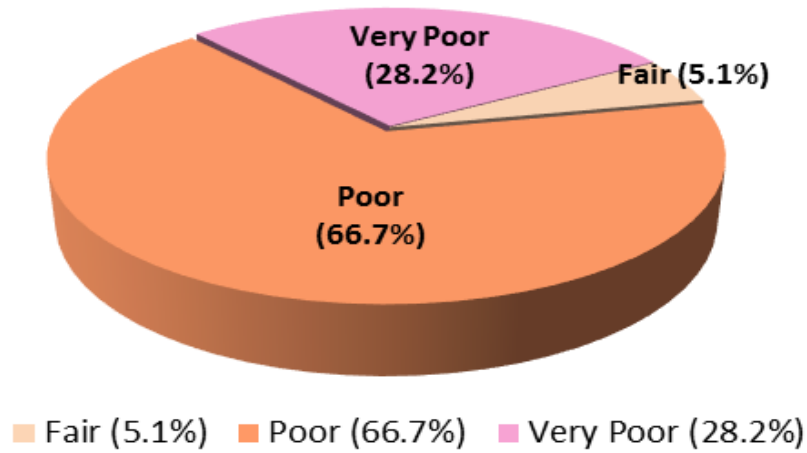
Dumpsite Accessibility by Road



Dumpsite Location Suitability



Environmental Sanitation Conditions at Dumpsite



Dumpsite Management

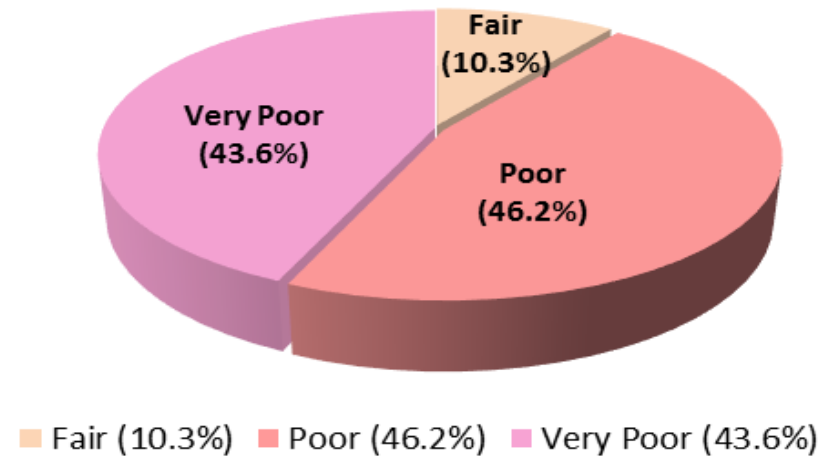


Fig. 4 Waste Disposal Assessment at Some Communities in Study Area (Hunivalley-Damang)

CONCLUSIONS/RECOMMENDATIONS

- ❖ The maps, graphs, photos and tables show locations, sanitation conditions, **recyclable materials** and other attributes of waste **disposal** situation in study area.
- ❖ The growing waste generation, disposal and sanitation problems are **beyond public sector to handle**.
- ❖ Situation calls for and offers opportunities to **private sector** investors and institutions **to explore to make profit and lend support**.
- ❖ Mining companies in affected communities must provide **significant and visible support in waste disposal** as part of their corporate social responsibilities.