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INTRODUCTION

- Solid waste management in Ghana has been slow to improve.² Data has shown that people who live closer to open dump sites have contracted diseases such as skin infections and malaria due to improper disposal.³
- While problems are well documented, realistic solutions and personal experiences and attitudes towards refuse disposal are not commonly known particularly in rural areas of the country.
- Improving refuse disposal contributes to Ghana's sustainable development goal 6.3, specifically by eliminating dumping and reducing pollution.⁴
- Research question: **What are the barriers to effective refuse disposal in Larteh, Ghana?**

METHODS

- Data was collected by conducting informal interviews with community leaders to develop key terms. One focus group was held with the District Health Management Team Officers. Additional key informant interviews were held with the environmental health officers at the municipal and local levels.
- Two focus groups were held with 20 community members with the assistance of community leaders as translators.
- Groups were asked a total of six questions that covered the refuse disposal process, attitudes towards refuse, education, satisfaction with current refuse disposal practices, and health issues related to refuse.
- Analysis was based in grounded theory, emerging themes were identified and described based on the collected data.

RESULTS

- Main dumping sites and water sources were identified by community partners. Geographic data was tracked and a map showing these points was created.
- Qualitative data from focus groups was categorized by theme. These included dumpsite inaccessibility.

DISCUSSION

- More coordination is needed between local community leadership and municipal authorities.
- Local efforts of dumping site clean-ups could benefit from more structure and organization.
- Further research is necessary to understand potential interventions to improve refuse disposal.
- The community provided their own insight for potential solutions which included the introduction of more communal dumping sites throughout the community, charging fines for littering, providing recycling bins, and providing education to community members.
- Limitations include convenience sampling and limited time in the country.

CONCLUSIONS

- Improving refuse disposal is a wanted goal among community members.
- Most community members understand the potential harms of improper refuse disposal.
- Residents of Larteh identified key shortcomings including the inconsistent collection from Zoomlion, the cost of personal bins, and the distance to and conditions of existing dumping sites.
- For sustainable improvement in refuse disposal, waste management infrastructure needs to be prioritized and changed.

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ACKNOWLEDGEMENTS

- We would like to thank MountCrest University and the people of Larteh for their generous contributions to this project. Without their support this project would not be possible.

Figure 1: Map of Dumping Sites, Water Sources, and 200m Buffers in Larteh, Ghana



Analysis of the data was done using the ggmap package (v3.0.0, Kahle & Wickham, 2013). Generated by Brenden Smith.

Map Data ©2024 Google Imagery ©2024 CNES / Airbus, Maxar Technologies.

Table 1: Themes and Descriptions from Community Focus Groups

Theme	Description
Inaccessibility to official dumping sites and inconsistent methods of dumping	<ul style="list-style-type: none"> Open dumping sites are closer and more convenient for people to use Commercial dumpsters are not always in a convenient place for all community members
Zoomlion (commercial provider) is not a viable option for most community members	<ul style="list-style-type: none"> Cost of bins is too high for individuals No focus group participants paid for personal collection bins
Community members value cleanliness and understand the repercussions of inappropriate refuse disposal	<ul style="list-style-type: none"> Participants suggested placing multiple community bins throughout the town “...You cannot be healthy in a dirty town even if your home is clean.”
Inconsistent community education on refuse disposal	<ul style="list-style-type: none"> Some participants reported never receiving education, while others said they and their children had
Communal desire for a clean environment	<ul style="list-style-type: none"> Some community members pay the landlord of their preferred dumping site with the understanding it goes towards “cleanup” of the site Communal labor volunteer groups service dumping sites to assist in cleanup