

# IM4DC

# Action Research Report

## SUMMARY

**Researchers:**

Abdul-Wadood Moomen – PhD student

**School/Centre:**

Department of Spatial Sciences  
Western Australian School of Mines

**University/Institutions:**

Curtin University

**Key themes:**

Community and Environmental Sustainability

**Key countries:**

Ghana

**Completion:**

February 2014

**Research aims:**

The objective of this PhD research was to investigate values and objectives of land-use interest groups in mining areas of Ghana by using:

- Stakeholder discussion workshops
- Participatory mapping
- Transect walks

**For further information on this action research:**

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## Development of a Multi-objective Spatial Suitability model: Wa-Lawra Greenstone Belt, Upper West Region, Ghana

This research, part of an ongoing PhD project, aimed to develop a suitability model for a possible peaceful co-existence between mining, agriculture, rural settlement and other land-use interest groups in developing countries. A case study was developed from a field visit to the emerging north-west gold province in the Upper West Region (UWR) of Ghana, the Wa-Lawra greenstone belt. Multi scale data including bio-physical and socioeconomic data generated by earlier research works in the area was also obtained for further problem specific analysis, observation, guidance and validation.

Three separate workshops and discussion forums were held at each of the 24 case study villages to introducing the objectives of the research to community leaders, understand the values and development objectives of the localities, and identify participants in the research. A major challenge during fieldwork was mobilisation of community, because there is a lot of prejudice against data collection related to mining in the communities; however, this was gradually overcome. Involving mining companies was also difficult.

Participatory mapping involved all stakeholder groups in sketching land cover, land use and land occupancy maps of their community, placing emphasis on community resources and the most valuable areas. As part of the participatory mapping activities, timelines were drawn to establish changes experienced in the community landscape with reference to land cover types, land use and land occupancy patterns over a twenty-seven year period (1986-2013). The participatory mapping concluded with transect walks around the various features shown on the maps. The main objectives were to validate the map features and to geo-reference these features for upload into a GIS environment for analysis. During transect walks, land cover types were photographed for further interpretation and analysis.

Recommendations are given for ongoing research.