

A transect walk undertaken in the informal settlement of Itereleng to observe community vulnerability

Location: Itereleng Informal Settlement, City of Tshwane Metropolitan Municipality, Gauteng Province, South Africa

Date: 21 June 2006

Sector focus: Multiple urban hazards, preparedness

Spatial focus: Community

Organization

Tshwane Metropolitan Municipality (former Pretoria) Disaster Risk Management Centre & African Centre for Disaster Studies, North-West University

Bibliographical details

Van Staden, D., Rogers, E., Makaudi, I., Winkler, J., White, J., Kangale, M., Rudman, N., Nkosi, S., Dreyer, T.R. and Coetzer, T. 2006. A transect walk undertaken in Itereleng informal settlement to observe community vulnerability. Pretoria: City of Tshwane Metropolitan Municipality Disaster Risk Management Centre. Unpublished report.

Language availability

English

Abstract

Emergency Management staff undertook a transect walk through Itereleng informal settlement, City of Tshwane Metropolitan Municipality (former Pretoria) as part of a course on community-based disaster risk reduction. The purpose of the transect walk was to determine the vulnerabilities and livelihood patterns of the community.

Itereleng (formerly known as Scrapyard) was founded in the 1940s, and is situated south of Laudium's Kathmandu Street. It is small (less than one-fifth of a square kilometre – 171,000 m²). "Itereleng" is a Tswana word meaning "*people doing things for themselves*".

Comparing aerial photographs, one sees that Itereleng is one of the few informal settlements whose boundaries have remained constant; however, within these boundaries new dwellings have been erected, especially toward the southern part, thus reducing access and potential evacuation routes because a number of roads have been encroached upon by newly constructed houses. Itereleng has grown to accommodate more than 12 000 people comprising of locals as well as foreigners from places such as Malawi, Mozambique and Zimbabwe.

Hazards in the settlement include appearance of sink holes in the dolomite rock beneath, flooding, and fire.

Intended users

Local government, physical, social and disaster planners

Background and context of country, location and project

- **Recent disasters?**

The lower one-fifth of the settlement, as one goes down slope, is in the flood plain of a river that is dry much of the year. Oral history suggests it has flooded significantly once since Itereleng was settled in 1940, but not recently enough for most inhabitants to beware of the risk. More frequent, indeed, nearly every year, there are local floods as storm run-off is dammed up by shacks and rubbish on its way down slope into the river bed. Small fires are very frequent. Fire brigade call-out data from a nearby and very similar settlement show 10 grass fires in the period August 2003-December 2007 and 21 shack fires between September 2004 and August 2008. Oral history obtained during the transect walk confirms that small fires are frequent.

- **Other recent crises (economic, political)?**

Unemployment, crime, HIV/AIDS and xenophobia are chronic crisis elements and contribute to the social problems of the community, and these, in turn, affect the ability of urban dwellers in the settlement to cope with and recovery from natural hazard events.

- **Recent displacements and population movements?**

The settlement history of South Africa is very complex, involving forced removals of different groups of people based on their race. The history of the Itereleng community is no different. The rapid move of low income Black South Africans to urban and peri-urban settlements after 1994, impacted and still impacts the Itereleng community. Furthermore, political instability in countries north of the South African border has resulted in the forced migration of people from troubled areas to informal settlements in South Africa including Itereleng.

- **Recent conflict?**

The past liberation struggle, and the different sentiments towards authority and government as a result thereof, still play a negative role in the successful partnership between local government and the community. The Apartheid system, as well as the hegemonic power of the ruling ANC government, created and still create a sense of helplessness and the inability to act on problems and challenges faced by the community. This is largely due to the fact that the community still expects the ANC government (and thus its decentralized structures) to cater for all their needs without their having to contribute. A "wait and see" attitude was evident in the settlement.

In addition, there are several immigrant groups from Zimbabwe, Malawi and Mozambique in the community, which creates tensions between immigrants and others. These tensions flared up into violent acts of xenophobia during rioting in April 2008.

Technical description

Hazard/risk type: Sink holes, flooding, fire, sanitation related diseases.

The settlement is built on a rather steep slope and if flooding occurred it would surge through the settlement with great force and speed. Fire is a significant disaster risk in this community. There are large areas of dry grass surrounding the settlement and no fire hydrants or fire hoses could be seen. Other problems include poorly maintained roads, which mean that rescue vehicles cannot access the area easily, and non-functional domestic water taps. One of the greatest risks facing the residents of Itereleng, and the reason why Itereleng cannot be formalised, is that the settlement is built on a dolomite area and is therefore subject to rapid development of sink holes. Although many residents indicated they were aware of this, very few of them knew exactly what this fact entailed.

Type of assessment: Transect walk to record observable vulnerability and to discuss vulnerability with residents in an ad hoc manner.

CRA process

- **Vulnerability analysis**

Existing information from the electronic and GIS database of the City of Tshwane Disaster Risk Management Centre were utilised in the planning and analysis process. The existing information was used as a basis for discussing hazards, development possibilities, and livelihood patterns with the community and its leaders. However, no explicit causal analysis of vulnerability was undertaken.

- **Capacity analysis**

Community capacity: Again, as above, community and household coping capacity was an implicit part of the planning application of the images and records of discussions gathered during the transect walk. However, no explicit capacity analysis was undertaken.

Researcher capacity: Methods used were simple and replicable and require little technical training for local government staff to use them. In terms of **Infrastructure**, the project utilized Aerial photographs of the settlement (Google Earth may work for some communities seeking to replicate); digital camera and GPS hand sets. **Human resources** were also critical, and these included well functioning and representative community leadership structures.

- **Analytical methods**

The qualitative data obtained from more than 500 digital images taken during the transect walk allowed the team to make deductions about livelihood patterns, resource sharing and economic activity in the settlement.

- **Tools**

- Open ended, unstructured conversations with community leaders and people attracted to the transect entourage stimulated by observable elements of the natural and built environment.
- Digital photographs of these elements and other aspects of settlement life, used for discussion later

Notes on Methods and Tools

A mixed data and information gathering process was used. Secondary data and information were firstly gathered by making use of the existing disaster risk management information database of the City of Tshwane Disaster Risk Management Centre. This was followed by a planned transect walk through the community, combined with informal interviews.

In order to ensure a representative cross section of the settlement would be covered, the route of the transect walk was planned by making use of satellite images. After the route was planned this was communicated to community leaders. The multi-cultural research team was divided into three different groups: talkers, listeners, and watchers. The “talkers” were individuals who were fluent in the local language and who could converse with the community members. The “listeners” were also fluent in the local language but their duty was to support the “talkers” by making notes of the informal conversations and to assist the “talkers” in probing for more information. The watchers were individuals in the research team who did not speak the local language. They were each given a digital camera and it was their responsibility to capture images of livelihoods/livelihood patterns, hazards and infrastructure problems.

The walk started at the entrance to the informal settlement. There was a constant group of community members who walked with the team explaining some of the hardships they encounter and the reasons therefore, as well giving an indication of what community life entails.

The study was conducted during the day. This meant that mostly unemployed community members were present. It was thus hard to determine the contribution of formal employment to the livelihoods of people in Itereleng.

Lessons learned

- Participatory risk assessments are a useful tool for creating awareness;
- A transect walk can be a useful tool, providing an overview of a specific area, though it should ideally be supplemented with other methods in order to provide greater depth.
- The link between vulnerability and specific hazards requires deeper analysis of causes and not simple observation and one-off conversation with residents (first approximation assessment, as opposed to analysis).

Key words

Transect walk, community-based risk assessment, observable vulnerability, City of Tshwane, South Africa, foreign migrants, informal settlement fires, floods, dolomite, sinkholes.

Cross references to other CRA Toolkit case studies

(1) South Africa - Fire Hazard and Vulnerability in Imizamo Yethu Informal Settlement; (2) Philippines - Enhancing Local Government Unit Capacities in Disaster Preparedness, Prevention & Mitigation; (3) Communities Vulnerable to Disasters in the Metropolitan Area of Guatemala City; (4) Venezuela - Pilot Study of Community Based Disaster Management Strategy for Earthquakes

Resource people

Dr. Dewald van Niekerk, Director: African Centre for Disaster Studies, North-West University, South Africa (Dewald.vanniekerk@nwu.ac.za)

Author of Explanatory Note

Ben Wisner bwisner@igc.org