

Executive Summary

Informal settlements continue to be a feature of South African urbanization. Municipalities of cities and towns continue to be confronted by mounting backlog realities while national and provincial human settlement strategies seek alternative approaches. A major challenge in this context is that inadequate waste management within informal settlements produces downstream flows of human waste that either bypass overburdened infrastructure networks or contribute to their dysfunction.

As a result, increasing pollution of deteriorating river systems poses a public health threat that goes beyond individual rights to basic services to the collective interests of broader society. Public sector concern about poorly managed waste streams flowing from dense settlements is reflected in cross-cutting national, provincial and local authority policies and sector strategies. However prospects for reducing this risk at point source remains peripheral to integrated development planning at a local authority level.

Against this background, the aim of research was to develop an alternative approach to planning effective risk reduction measures by facilitating municipal partnering with communities. The premise for forging partnerships was that of engaging stakeholders who are instrumental in producing the risks, municipal departments on the one hand, and affected residents on the other hand, in sharing responsibility for effecting change in response to risk assessments.

Community Based Risk Assessment (CRA) is a field-tested methodology that engages affected residents in analyzing causes of risks and hazards on a local level. However, in order to mobilise municipal responses to the predicament, their real concerns and authentic drivers were taken more concertedly into developing an approach to partnering with residents. While perceptions of hazards and risks differed, interaction between municipal and community perspectives made the overlaps between people's behaviour or practices, and infrastructure or services, more apparent.

In the Western Cape region, intentions that several Community-based Risk Assessments (CRAs) conducted between 2006 and 2008 would inform integrated development planning (IDPs) to reduce risks, did not materialize. Picking up threads from selected case studies where CRAs by affected residents had initially exposed hazards and risks from waste streams, assessment was extended to interaction between instrumental stakeholders for the purpose of planning to reduce risks.

Firstly, informal settlements were situated in their water environment to explore whether municipal concerns about downstream contamination, beyond the boundaries of informal areas, would drive risk reduction more effectively than has a basic services delivery imperative.

Secondly, comparisons between community experience and municipal concerns found sufficient common cause across perceptions of causal factors to initiate interaction between the different perspectives.

Thirdly, organizing distinct causes of risk into categories of causal factors implicated different municipal departments responsible for waste stream management in *Infrastructure*, as well as all affected residents as users for *Behavioural* factors. *Services* factors were revealed as resulting from the cross-cutting linkages between the actions of both municipality and community.

Finally, municipal and community perspectives were brought to bear upon their

potential respective efforts to support and sustain risk reduction measures. Interaction between communities and municipalities highlighted their capacity to bring about practical change by working together. It was made apparent in jointly conceived Action Plans that *Infrastructure*, *Behavioural* and *Services* actions for the purpose reducing risks are inter-dependant.

An interactive approach to risk reduction was then field-tested in different case study settings. Based on field research in two differing municipal regions with 8 informal settlement case studies, the tools were refined. Of the case studies, three are selected for presentation in examples and appendices of this document in order to illustrate the authentic outcomes of application. Diverse settings and conditions that are replicated across all eight case studies are covered in these selected case study processes.

It was found that the different social and technical capacities of informal communities and municipalities may be extended from risk assessment to facilitating community and municipal partnerships in differing informal settlement and municipal contexts. Potentially creative and cooperative interventions were required in each instance to reduce the particular waste management hazards and risks identified in CRAs that were also of municipal concern. A transition from risk assessment to envisaging change, sharing ideas and planning also called for attention to monitoring progressive actions regarding:

- Poor maintenance of drainage and stormwater systems
- Inadequate grey-water collection and disposal
- Lack of care-taking and monitoring of hygienic toilet use
- Inadequate access to functional public facilities
- Poor reporting on and delayed responses to dysfunction of public facilities
- Lack of monitoring the collection, disposal and recycling of solid waste.

It was found that where municipal departments were willing to participate in interaction with residents, their different capabilities could readily be aligned in action plans focusing on reducing each specific waste stream related risk. In all cases, actions towards change relied on the capabilities of both affected residents and municipal departments as complementary contributions.

A sequence of four stages was refined by reviewing outcomes and the processes applied in the different case study settings. Effectiveness in respect of progressive targeting and involvement of stakeholders who are instrumental in producing risks, as well as efficiencies in terms of time and cost, have been taken into consideration to refine the processes and tools comprising the approach presented in this document.