# Executive Summary

## Introduction

Poor management of greywater in informal settlements in South Africa (RSA) poses a daily threat to human and environmental health. In non-sewered, informal and low-income settlements water-related services are frequently dysfunctional and the disposal of greywater creates an unpleasant environment and becomes hazardous when mixed with blackwater and solid waste. Greywater is produced from household processes (e.g. washing dishes, laundry and bathing) without input from toilets, and is generally perceived by residents of informal settlements as being wastewater or unwanted water that is dirty and must be discarded (Carden *et al.,* 2007).

A previous WRC study (K5/1524) provided a general overview of conditions in nonsewered settlements in RSA, and highlighted the implications for greywater management in these settlements, where settlement density was found to be one of the most challenging obstacles (Carden *et al.,* 2007). One of the recommendations from the study highlighted a need to conduct a longer-term study in which communities without on-site waterborne sanitation could consider various options for managing greywater including re-use and disposal. It was with this in mind that the present study was undertaken, with the hypothesis that sustainable options for the management of greywater in non-sewered settlements are more likely to be achieved when local residents are involved in managing greywater themselves rather than following a traditional or conventional approach in which the provision of rudimentary engineered services occurs with minimal consultation and involvement of residents who are the end users of these services. The overarching aim of this study was therefore to explore how greywater could be managed by 'community-level' initiatives, meaning that local residents themselves might collectively offer plans and appropriate small-scale solutions to manage the problem in the absence of any formal drainage in the settlement.

It was acknowledged that tensions exist between what local authorities are prepared to do and what local residents expect. The research question therefore sought to understand how 'bottom up', community-led initiatives could contribute to managing greywater. For this reason a Participatory Action Research (PAR) approach was adopted, which meant that the researchers attempted to work with local people in a collaborative study at selected settlements – to establish the capacity for, and interest in managing greywater; and to test low-cost greywater management options and means of disposal.