

A cost-benefit analysis of the *Working for Water* Programme on selected sites in South Africa

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Abstract

The *Working for Water Programme* entails the removal of water-consuming alien vegetation and the restoration of low water-consuming indigenous vegetation. It was implemented in 1995 to address the management of catchment areas in South Africa. The question of this programme's economic feasibility in the Western Cape and in KwaZulu-Natal has been addressed by various authors. This paper addresses its feasibility in the Eastern Cape Province and regions of the southern Cape. Cost-benefit analyses are carried out on six sites: Tsitsikamma, Kouga, Port Elizabeth Driftsands, Albany, Kat River and Pott River. It is shown that catchment management on all the sites carried out by the *Working for Water Programme* is inefficient.

This conclusion is subject to three qualifications. The first is that more work remains to be done on the evaluation of the non-water benefits. Known non-water benefits, like fire damage reduction and preservation of biodiversity were not included in the calculations. The second qualification is that at lower discount rates, for instance 5%, the Kouga project is efficient. The third qualification is that if 30% cost savings could be achieved and a discount rate of 5% be employed, both the projects on the Kouga and Tsitsikamma sites will become efficient. These two projects are being run in catchments which serve areas where high consumptive demand exists.

Keywords: alien vegetation, non-water benefits, marginal costs, mountain catchment management, social discount rate, water yield, livestock

Introduction

The *Working for Water Programme* is the single biggest conservation project in South Africa in terms of manpower and impact (Hosking et al., 2002). In 1998 there were 260 000 people in South Africa were employed on it (Hosking et al., 2002). The Programme entails removing alien vegetation from selected areas and restoring indigenous vegetation there. Costs and benefits are incurred in this process. The benefits include increasing streamflow, increasing livestock carrying capacity, reducing fire hazard damage and preserving biodiversity.

Initially most of the work on the Programme conducted in the Eastern and Southern Cape was in the Tsitsikamma Mountains. More recently attention has been directed toward the coastal region, mainly in the Port Elizabeth and Port Alfred areas. The biggest urban undertaking by the *Working for Water Programme* is in the Port Elizabeth area, where 2 050 people were employed in 1999 (Buckle, 1999).

The economic rationale underlying the Programme in selected mountain catchments in the Western Cape was presented by Van Wilgen et al. (1997) and Marais (1998). A cost-benefit analysis of the *Working for Water Programme* in the Mgeni catchment in KwaZulu-Natal was conducted by Gillham and Haynes (2001). Their analyses concluded that the programme was efficient.

Some cost-benefit analysis was also done in the Eastern Cape (Hosking and Du Preez, 1999), but not much. This study aims to fill this gap: the relevant costs and benefits are estimated and com-

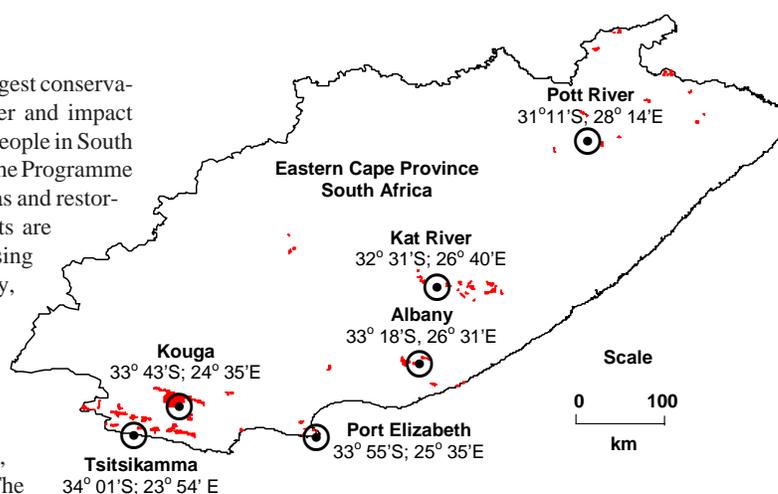


Figure 1
Location of the six Working for Water Programme projects

pared at six sites in the Eastern and Southern Cape: those on the Tsitsikamma, Kouga, Port Elizabeth Driftsands, Albany, Kat River and Pott River sites (Fig. 1).

The study area

Site selection for this study was made with the aim of including as diverse a range of sites as possible. In this regard, *inter alia*, reference to topography, indigenous and alien vegetation present was taken into account. Brief background information on the six sites selected is presented in Table 1.

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