



<p><b>WORKING PROJECT TITLE</b></p>	<p>The dynamics of recovering riparian vegetation along the Dwars River, Western Cape: how much intervention is needed to achieve restoration of riparian vegetation following the clearing of invasive alien trees?</p>
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<p><b>ACADEMIC LEVEL OF THE PROJECT</b></p>	<p>MSc</p>
<p><b>PROJECT BACKGROUND</b></p>	<p>The Dwars River catchment is in the Banghoek valley near Stellenbosch. The riparian zone of Dwars River covers approximately 44 ha. The river and tributaries are heavily infested with invasive alien plant species, notably <i>Alnus glutinosa</i> (Black Alder), <i>Acacia melanoxylon</i> (Blackwood), <i>Populus alba</i> (White Poplar), <i>Acacia dealbata</i> (Silver Wattle), <i>A. saligna</i> (Port Jackson), <i>A. mearnsii</i> (Black Wattle), and shrubs and herbaceous invasive vegetation such as <i>Solanum mauritianum</i> (Bug weed) and <i>Rubus</i> spp. (Bramble).</p> <p>Since August 2018 the Wildlands Conservation Trust, with funding from the Natural Resource Management (NRM) program of the Department of Environment, Forestry and Fisheries, has been coordinating the clearing of invasive species along the Dwars River. The Western Cape government also made drought-relief funding available for mechanical removal of blockages and for clearing invasive plants from the full length of the river. The initial clearing phases are scheduled for completion by the end of 2019. Wildlands has an active rehabilitation process of establishing native trees and shrubs to fast-track the recovery of the natural vegetation.</p> <p>There is a need to develop a plan to monitor the recovery of native vegetation following these clearing operations. Such a plan should take account of realistic end-points of recovery, aspects of the ecology of native species in the</p>



	<p>areas. Among the key questions to be addressed are: is tree planting justified to ensure restoration; are cheaper "soft-engineering" options (such as brush mattedness, and the use of dormant cuttings) adequate?</p> <p>Elucidation of the modes of reproduction and spread of key woody species along the Dwars River is needed to provide realistic guidelines and indicators for restoration projects.</p>
<p><b>FURTHER READING</b></p>	<p>Galatowitsch, S.M. &amp; Richardson, D.M. (2005). Riparian scrub recovery after clearing of invasive alien trees in headwater streams of the Western Cape, South Africa. <i>Biological Conservation</i> 122: 509-521.</p> <p>Holmes, P.M., Richardson, D.M., Esler, K.J., Witkowski, E.T.F. &amp; Fourie, S. (2005). A decision-making framework for restoring riparian zones degraded by invasive alien plants in South Africa. <i>South African Journal of Science</i> 101: 553-564.</p>
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