

3. BACKGROUND

3.1 The mission of the DWAF

The Department of Water Affairs and Forestry (DWAF) is the primary agency responsible for water resources management in South Africa. With respect to water quality its mission is to ensure the fitness of South Africa's surface water, groundwater and coastal marine resources, for water uses and for the protection of aquatic ecosystems, on a sustainable basis (DWAF, 1986). The DWAF views aquatic ecosystems as a primary resource upon which development and other uses are based and sustained.

3.2 DWAF's water quality management principles and approaches

The DWAF has adopted a number of policies and strategies with regard to water quality management, which have been elsewhere described in some detail (DWAF, 1991). Of these, a number have been highlighted below because of their relevance for aquatic ecosystems management.

The basic geographic unit of water quality management is the *river catchment*. Catchment management must integrate land use effects with physical characteristics of the catchment and with external factors, such as economics, to plan and control water quality. Successful water quality management relies on integration of these diverse factors into a holistic management system.

A key aspect in the management of water quality in a catchment is the formulation of *receiving water quality objectives*. These objectives are a statement of the quality in a water body that must be maintained. Objectives are set with the requirements of both water users and aquatic ecosystems in mind; as well as various other considerations such as technological, economic, political and social factors which affect the use of the water and the quality of the water in the water body.

In managing the effects of developments on water quality, a *precautionary approach* is adopted, in which active measures are taken to avert or minimise potential risk of undesirable impacts on the environment. Therefore, when developments are proposed, it is required that probable impacts on the health of people and the resource must be

predicted, as well as the environmental and economic benefits. This precautionary approach is applied in all the water resource decisions made by the DWAF.