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The Influence of South Africa's Research Catchments on National Water Policy

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The history of South Africa's research catchments is intertwined with the history of commercial afforestation. The first research catchments established in the late 1930's in South Africa were initiated to address the questions raised around the impacts of commercial afforestation on water. The initial results from these catchments showed the significant negative impacts that commercial afforestation had on streamflows relative to the vegetation the commercial plantations replaced. The results and data from these catchments heavily influenced the policy surrounding the planting of commercial forestry in South Africa starting from 1968 with the introduction of the Afforestation Permit System (APS) following the amendment of the Forest Act (Act No. 72 of 1968). The data and results continues to influence policy today through the declaration of streamflow reduction activities in the National Water Act (1998), despite monitoring having ceased in most of the historical catchments. Beyond addressing questions on the impacts of afforestation, the monitoring in the research catchments that remained operational addressed questions surrounding the impacts of various land management options and treatments on water resources and provided the data for the development of South African hydrological models.