

12941

12941 JAC 95

FLOODS, WATER AND AWARENESS: RESOURCE MANAGEMENT IN THE WESTERN CATCHMENTS

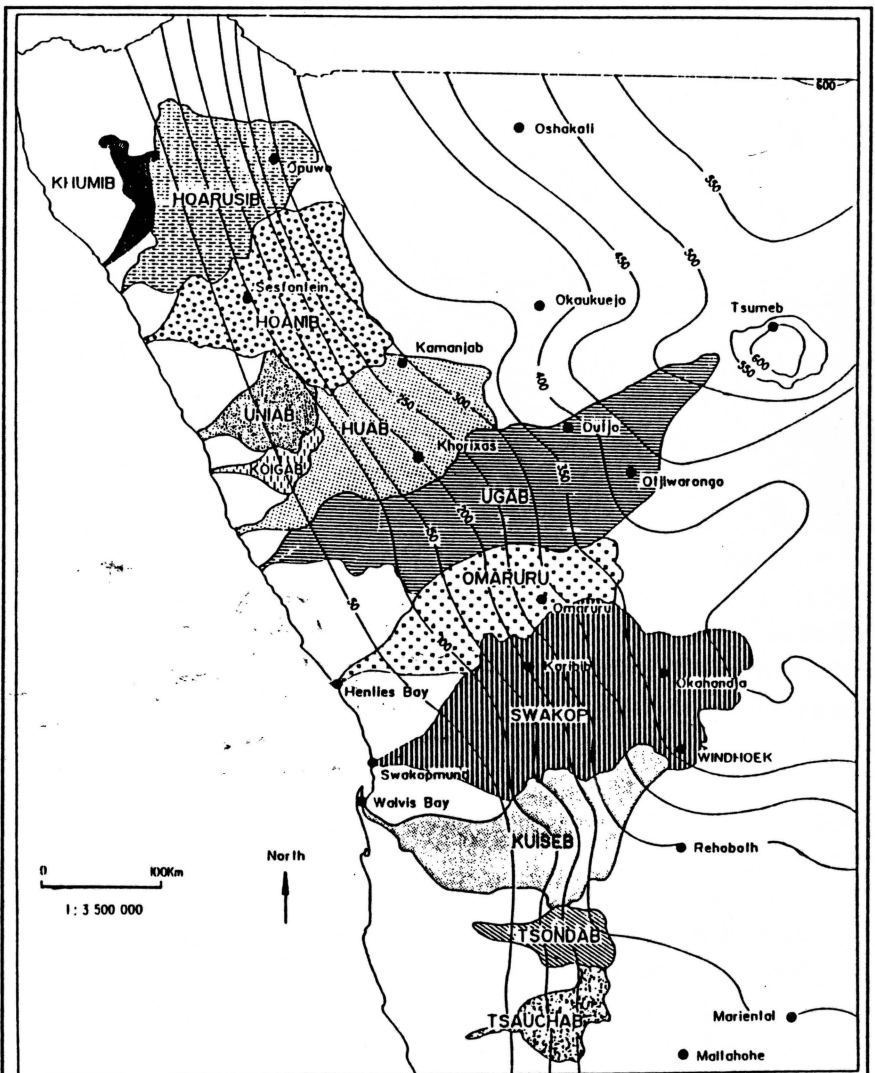
(Kathy and Peter Jacobson)

Namibia's westward-flowing ephemeral rivers flow for only short periods following heavy summer rains. Twelve major rivers, such as the Kuiseb which "flows" past Gobabeb, originate in the inland escarpment of western Namibia and drain towards the Atlantic. The upper reaches of most of the rivers run through commercial farmland before passing onto communal farmlands, and finally into parks. All of the rivers form linear oases in their mid and lower reaches where they traverse arid regions. Along their lengths, water and vegetation resources are extensively used by people, livestock and wildlife, and are important assets to Namibia, particularly for the agriculture and tourism sectors.

Although ephemeral river systems drain more than 30% of the Earth's surface, little attention has been paid to the biota they support, and the biotic resources they provide various users. Peter Jacobson initiated a PhD research project in 1993 to study how the highly variable flooding regime structures and maintains ephemeral river ecosystems. In addition to the obvious effects of flooding on establishment and growth of riparian vegetation, Peter's research examines the importance of nutrients and organic matter carried by the water to the desert reaches of the riparian forests.

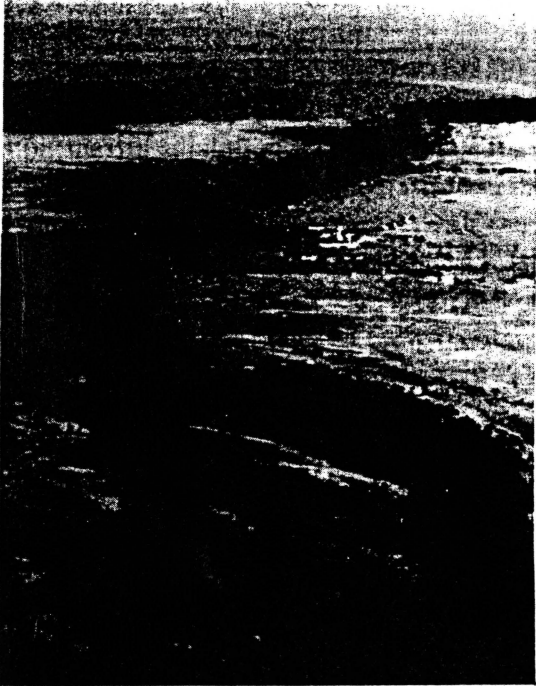
The final phase of this research involves modelling the effects of altered hydrological regimes (for example, due to climate change or impoundment) on the lower reaches

of ephemeral rivers. Early on in Peter's research, staff of the Desert Research Foundation (DRFN) and the Department of Water Affairs (DWA) recognised the need to raise awareness of decision makers and resource users about the rivers, catchments and their resources.



Twelve major ephemeral river catchments drain northwestern Namibia

The Ephemeral Rivers Project, funded by the Swedish International Development Authority (SIDA) overseen by the DWA, will produce a book, a video and a map about the region. The book, on which the video and the map are based, provides



One of the most striking features of the western catchments is the riparian forests which cross the arid landscapes of the Namib Desert, such as the Kuiseb seen here passing Gobabeb, home of the Desert Research Foundation of Namibia. (photo: P & K Jacobson).

basic information about the resources of the westward-flowing ephemeral rivers and their catchments; and how people living in this region are currently using them. The effects of historical and current social and economic policies, laws, and development upon these resources and their users are also discussed. Given the unique features of this arid region, future development must be carefully coordinated and the book points out that regional climate, a rapidly expanding population, and limited and finite water resources, make well co-ordinated and sustainable development in the region an urgent necessity.



The fact to remember is that uninterrupted flooding is essential in the westward-flowing ephemeral rivers. Any development within a catchment which alters runoff patterns can affect the environment and its users downstream. It is essential that all Namibians dependent upon the natural resources of the catchments are as aware of this fact as are these students, running from a flood in the Kuiseb River (photo: P & K Jacobson).

The book by Peter & Kathy Jacobson and Mary Seely has been guided by a Steering Committee representing the Department of Water Affairs; the Directorate of Planning of the Ministry of Agriculture, Water and Rural Development; the Directorate of Environment Affairs (Ministry of Environment and Tourism), SIDA and the DRFN. The first draft of the book was sent out for review to the government and private sectors in September 1994. Two-thirds of the 73 reviewers provided comments, indicating the high level of concern regarding the need for co-ordinated planning and development in the region. While the book is primarily a reference document for resource users, planners, and decision makers, as well as university students and secondary school teachers, the video is intended as a brief visual portrayal of the region, highlighting the essential issues raised in the book. In addition, a map illustrating the catchment boundaries is currently being designed to facilitate land use planning and natural resource management in western Namibia. The book, video and map should all be available by this coming May.