

**EXPLORING SUSTAINABLE WATER RESOURCES MANAGEMENT FROM
SYNERGIES OF THE INDIGENOUS KNOWLEDGE SYSTEMS OF THE TOKA
LEYA PEOPLE OF ZAMBIA AND INTEGRATED WATER RESOURCES
MANAGEMENT**

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Award of the Master of Science Degree in Integrated Water Resources Management

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DECLARATION

I, Choolwe Shalwindi, declare that the work presented in this study for the Master of Science Degree in Integrated Water Resources Management is the result of my own work. It has not been submitted for any other qualification at this university or any other institution. All the work of other persons used in this thesis has been duly acknowledged.

Signed: Date:

DEDICATION

I dedicate this work to my family and mentors who believed in me and inspired me greatly to study and reach out academically.

APPROVAL

This dissertation of Choolwe Shalwindi has been approved as fulfilling part of the requirements for the award of the Master of Science degree in Integrated Water Resources Management (MSc. IWRM) by the University of Zambia.

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ACRONYMS

CIKARD: Centre for Indigenous Knowledge for Agriculture and Rural Development.

CSO: Central Statistical Office.

GWP: Global Water Partnership.

IK: Indigenous Knowledge.

IUCN: International Union for Conservation of Nature.

IWRM: Integrated water Resources Management.

MLEWD: Ministry of Mines and Water Development.

MLGH: Ministry of Local Government, Housing.

SNDP: Sixth National Development Plan.

SPSS: Statistical Package for Social Sciences

UNDP: United Nations development Programme.

UNESCO: United Nations educational, Scientific and Cultural Organisation.

WWF: World Wildlife Fund.

Abstract

Zambia's ethnic groups have each developed indigenous practices and systems that make up their Indigenous Knowledge (IK). This IK has not been adequately documented nor has it been used in modern approaches to natural resource conservation. IK is useful not only in managing water resources but also in ameliorating climatic variances that occur in form of droughts and floods. Such Indigenous Knowledge encompasses more than water resources management, it also takes into account other systems that play a role in the resources such as land use practices and trees.

This study focused on exploring and documenting Toka Leya IK in relation to water resource management and establishing whether or not IK could be used in synergy with Integrated Water Resources Management and vice versa in the study area. The study analysed the Toka Leya IK in relation to water management and compared them to tenets of IWRM.

The general research question posed in this study was: How can IK and IWRM be used in synergy to achieve sustainable water resources management among the Toka Leya of Chief Sekute? In order to achieve the research aim, specific research questions that were posed were: (1) What indigenous views are held by the Toka Leya of Chief Sekute's Chiefdom about water? (2) Are the indigenous water practices of the Toka Leya people compatible with IWRM practices? (3) Is it feasible to incorporate the Toka Leya IK in IWRM and vice versa?

Data collected was largely qualitative and hence its analysis was descriptive. The respondents were purposively sampled from the Chiefdom and Government offices directly involved in water and sanitation in the district.

Key findings of the study were that the Toka Leya view water as a vulnerable and finite resource that should be conserved. The Toka Leya also use indigenous practices such as the

use of flora to locate underground water sources and the basic principle of surface water retention after the wet season. There were rules and regulations that governed the abstraction and use of water resources that ensured sustainable use of the available water resources for the whole community. The rules and regulations also ensured the conservation of other natural resources such as flora more importantly riparian and high water table indicator trees.

The conclusion of the study was that Toka Leya IK is indeed compatible with IWRM tenets. It is evident that Toka Leya IK has aspects that encourage participatory approach in water management. Women are not excluded from the management of water and water resources are not viewed as a free gift. Water is not considered as infinite in supply. As such the two approaches can be used in synergy to achieve sustainable water resources management in the study area.

Key recommendations are that more future research be undertaken in IK along with botanical research that will validate the research findings that do not have scientific backing. Experts of IK, who are the indigenous people in any area, should be included during planning, implementation and monitoring of any projects that relate to water resources. Documentation of IK for all the ethnic groups is important as this will preserve this precious knowledge base that can be drawn upon at all times.