



# FROM SUBSISTENCE FARMING TO SUGAR-CANE MONOCULTURE: IMPACTS ON AGROBIODIVERSITY, LOCAL KNOWLEDGE AND FOOD SECURITY

*A case study of two irrigation and agricultural  
development projects in Swaziland*



FOOD AND AGRICULTURE ORGANIZATION  
OF THE UNITED NATIONS  
ROME 2008



# FROM SUBSISTENCE FARMING TO SUGAR-CANE MONOCULTURE: IMPACTS ON AGROBIODIVERSITY, LOCAL KNOWLEDGE AND FOOD SECURITY

*A case study of two irrigation and agricultural  
development projects in Swaziland*



FOOD AND AGRICULTURE ORGANIZATION  
OF THE UNITED NATIONS  
ROME 2008

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

All rights reserved. Reproduction and dissemination of material in this information product for educational or other non-commercial purposes are authorized without any prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of material in this information product for resale or other commercial purposes is prohibited without written permission of the copyright holders. Applications for such permission should be addressed to the Chief, Publishing and Multimedia Service, Information Division, FAO, Viale delle Terme di Caracalla, 00100 Rome, Italy or by e-mail to [copyright@fao.org](mailto:copyright@fao.org)

© FAO 2008

Photos: © FAO / G.Bizzarri  
Graphic design: A.Porfido

---

# CONTENTS

<b>Acknowledgements</b>	iv
<b>List of acronyms</b>	v
<b>1. Introduction</b>	1
<b>2. Overview</b>	2
Socio-economic context	2
Agriculture and livestock sectors	3
Macroeconomic trends and related impacts on food security	4
<b>3. The projects and their impacts</b>	6
National development strategy and water irrigation schemes	6
Komati Downstream Development Project	7
Lower Usuthu Smallholder Irrigation Project	8
Assessing the impacts of the KDDP and the situation in the LUSIP area	10
Study methodology	10
Discussion of results: the KDDP	12
Land availability and allocation to crops	12
Crops grown	14
Farming practices, inputs, and food storage techniques	15
Livestock	18
Access to membership	19
Discussion of results: the LUSIP	20
Food security implications of the KDDP	22
<b>4. Concluding remarks and recommendations for implementation of the LUSIP</b>	27
<b>References</b>	31
<b>List of tables</b>	
1.Crops grown before and after implementation of the KDDP	14
2.Livestock population before and after implementation of the KDDP	18
3.Crops grown at Mahlabatsini and Maphobeni (LUSIP)	21
4.Status of selected wild edible plant species in two areas under the KDDP	23
<b>List of figures</b>	
1.Map of the LUSIP area	9
<b>List of plates</b>	
1. A focus-group discussion with male farmers.	10
2. A focus-group discussion with female farmers.	11
3. Maize cobs tied together in clusters and placed on a crib to dry.	17
4. Unshelled groundnuts stored in a clay pot.	17
<b>List of boxes</b>	
1. Low profitability of sugar-cane production and impacts on smallholder growers	24

# ACKNOWLEDGEMENTS

This report is based on a study conducted in 2005 by Thandie Lupupa and Similo Mavimbela from Swaziland. The consultant Andrea Rossi compiled the key findings and discussed them in a wider context of other literature resources. Regina Laub from the FAO Gender, Equity and Rural Employment Division provided technical inputs and guidance and also supervised the production of the report.

# LIST OF ACRONYMS

<b>AIDA</b>	Acquired immunodeficiency syndrome
<b>BADEA</b>	Arab Bank for Economic Development in Africa
<b>DBSA</b>	Development Bank of Southern Africa
<b>EIB</b>	European Investment Bank
<b>EU</b>	European Union
<b>GDP</b>	Gross domestic product
<b>HIV</b>	Human immunodeficiency virus
<b>ICDF</b>	International Cooperation and Development Fund
<b>IFAD</b>	International Fund for Agricultural Development
<b>IMF</b>	International Monetary Fund
<b>KDDP</b>	Komati Downstream Development Project
<b>KOBWA</b>	Komati Basin Water Authority
<b>LUSIP</b>	Lower Usuthu Smallholder Irrigation Project
<b>NDS</b>	National development strategy
<b>NGO</b>	Non-governmental organization
<b>NMC</b>	National Milling Corporation
<b>PRA</b>	Participatory rural appraisal
<b>SEAGA</b>	Socio-Economic and Gender Analysis
<b>SKPE</b>	Swaziland Komati Project Enterprise
<b>SNL</b>	Swazi Nation Land
<b>SWADE</b>	Swaziland Water and Agricultural Development Enterprise
<b>TDL</b>	Title Deed Land
<b>UNAIDS</b>	United Nations Joint Programme on HIV/AIDS
<b>UNDP</b>	United Nations Development Programme
<b>WFP</b>	World Food Programme