



KCDP
Kenya Coastal Development Project

FROM RIDGE TO REEF

A legacy for sustainable
coastal development in Kenya

Renison Ruwa

Jacqueline Uku

Melckzedek Osore

Stephen Mwangi

FROM RIDGE TO REEF

A legacy for sustainable
coastal development in Kenya



Book Title: The Kenya Coastal Development Project. **From Ridge to Reef - *A legacy for sustainable coastal development in Kenya*** xiv + 412p.

Disclaimer: The designations employed and presentations of materials and views throughout this book are those of the authors and do not imply the expression of any opinion, whatsoever, on the part of Kenya Marine and Fisheries Research Institute or its partner institutions concerning the legal status of any county, districts, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Mention of the names of firms or commercial products does not imply endorsement. The views expressed herein are those of the author(s) and do not necessarily reflect the views of the World Bank, The Global Environmental Facility or the consultants that provided technical reports and support to the KCDP and the Government of Kenya.

Lead Editors: Renision K. Ruwa, Jacqueline N. Uku, Melckzedeck K. Osore and Stephen N. Mwangi

Reviewers: Dr. Nelly Isigi Kadagi, Dr. Esther Fondo, Dr. Jelvas Mwaura, Lilian Daudi, Victor Mwakha Aliti and Chepkemboi Labat

Cover Design: Gordon Arara (Freelance Designer) & Henry Namai (Pwani University)

Design & Layout: Gordon Arara & Henry Namai

Photographs used: From the KCDP depository of photographs
in the chapters

ISBN:



978-9914-40-207-0

For bibliographic purposes, this book should be cited as follows:

©KMFRI, 2021. **From Ridge to Reef: *A legacy for sustainable coastal development in Kenya***, (Eds) Ruwa, RK, Uku, JN, Osore, MK, Mwangi, SN. Kenya Marine and Fisheries Research Institute, Mombasa, Kenya. xiv + 412p.

KMFRI encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of KMFRI as the source and copyright holder is given and that KMFRI's endorsement of users' views, products or services is not implied in any way.

This publication was made possible by the generous support of the Government of Kenya through the Counterpart Financing to the Kenya Coastal Development Project. The authors are KCDP project institutional teams and the content reflects the inputs of numerous partners.

The work of KCDP can be found online on <https://youtu.be/zHyjPvXH3tk>

Table of Contents

Foreword	v
Preface	vi
Acknowledgements	vii
List of acronyms and abbreviations.....	ix
Executive summary.....	xii
Introduction	xiii
Part I: NATURAL RESOURCE MANAGEMENT AND CONSERVATION	1
Chapter 1: NATURAL RESOURCES AND BIODIVERSITY OF THE KENYA COAST.....	3
Chapter 2: BIODIVERSITY OF KENYA’S COASTAL LAKES	21
Chapter 3: DEVELOPMENT OF CONSERVATION STRATEGIES AND MANAGEMENT PLANS.....	33
Chapter 4: ENHANCING MANAGEMENT EFFECTIVENESS IN KENYA’S COASTAL PROTECTED AREAS.....	49
Chapter 5: TREE FARMING: A major contributor to household incomes and conservation	63
Chapter 6: COMMUNITY BASED RESTORATION OF COASTAL AND MARINE HABITATS	79
Chapter 7: SUPPORTING SUCCESSFUL COMMUNITY CONSERVATION PROJECTS IN COASTAL COUNTIES	93
Chapter 8: ENVIRONMENTAL GOVERNANCE	101
Chapter 9: SPATIAL PLANNING FOR THE MANAGEMENT OF COASTAL RESOURCES.....	119
Part II: SUSTAINABLE FISHERIES MANAGEMENT	135
Chapter 1: STATUS OF THE NEARSHORE FISHERIES RESOURCES IN KENYA	137
Chapter 2: STOCK ASSESSMENT OF KEY COMMERCIAL FISHERIES SPECIES OF KENYA:	155
Chapter 3: THE FISHERIES MANAGEMENT REGIME IN KENYA	169
Chapter 4: FISHERIES GOVERNANCE IN BEACH MANAGEMENT UNITS IN COASTAL KENYA	185
Chapter 5: DEVELOPMENT OF FISHERIES MANAGEMENT PLANS AND OPPORTUNITIES FOR IMPLEMENTATION	201
Chapter 6: ADVANCING ALTERNATIVE FISHING GEAR TECHNOLOGIES	227
Chapter 7: AQUACULTURE INVESTMENTS AND OPPORTUNITIES FOR COASTAL COUNTIES	245
Chapter 8: FISHERIES POST-HARVEST AND QUALITY CONTROL	265

Part III: COMMUNITY DRIVEN DEVELOPMENT	279
Chapter 1: BUILDING THE CAPACITY OF COMMUNITIES THROUGH THE COMMUNITY DRIVEN DEVELOPMENT APPROACH.....	281
Chapter 2: BUILDING ASSETS WITH THE VULNERABLE AND MARGINALIZED GROUPS OF THE KENYA COAST.....	303
Chapter 3: EMPOWERING COMMUNITIES TO CREATE, GROW AND MANAGE WEALTH	317
Chapter 4: BUILDING THE NEXT GENERATION OF COASTAL PRACTITIONERS THROUGH ACADEMIC TRAINING.....	333
Chapter 5: BUILDING INSTITUTIONAL CAPACITY TO SUPPORT SUSTAINABLE FISHERY AND NATURAL RESOURCE MANAGEMENT	347
Chapter 6: MAINSTREAMING ENVIRONMENTAL AND SOCIAL SAFEGUARDS INTO COASTAL DEVELOPMENT	355
Part IV: REFLECTIONS ON LESSONS LEARNED IN BUILDING A LEGACY FOR SUSTAINABLE COASTAL DEVELOPMENT	365
ANNEXES	385