

Perceptions of ecosystem services and benefits to human wellbeing from community-based marine protected areas in Kenya

Shauna L. Mahajan

Tim Daw

© Images from left Kazungu Samson, Daniel Chamanga, Hamisi Fundi

Stockholm Resilience Centre
Sustainability Science for Biosphere Stewardship



Stockholm
University

THE
BEIJER
INSTITUTE
OF ECOLOGICAL ECONOMICS



KUNGL.
VETENSKAPS-
AKADEMIEN
THE ROYAL SWEDISH ACADEMY OF SCIENCES

FUNDED BY

MISTRA

The Swedish Foundation for
Strategic Environmental Research

Settlements along the Kenyan coast have a long history of dependence on marine resources

McClanahan, 1997



From top left, clockwise © Kazungu Samson, Bahati Kenga; Hamisi Fundi

© Macdonald Mramba



Overfishing and climate change are increasingly threatening these ecosystems, leading to social-ecological vulnerability

Cinner and Bodin, 2010; Cinner et al., 2012

Marine protected areas are popular tools that aim to protect ecosystem processes, functions, and services

eg. Dugan 1993; McClanahan et al., 1999

Cinner and Bodin, 2010; Cinner et al., 2012b

© Hamisi Omari



Given the failures of top-down management, marine resource governance is shifting to a bottom-up approach that place communities at the forefront of planning and management

Community-based MPAs in Kenya

Tengefu n. Swahili 'to set aside'

First *tengefu* implemented in 2005

As of 2014, 18 in various stages of development



Research aim

This study explores the perceptions and feelings held by community members towards two newly implemented community-based MPAs in Kenya.

We examine the inception and evolution of each tengefu, trace the flow of benefits to different groups of people, and explore how community members perceive tengefus and their impacts on ecosystem services and human wellbeing



A framework for analysis

Ecosystem services and human wellbeing

ecosystem services (ES)
the benefits humans receive from
nature

MA, 2005

assumed that ES contribute to **human wellbeing** – but the empirical linkages are poorly understood.

Carpenter et al., 2006, 2009

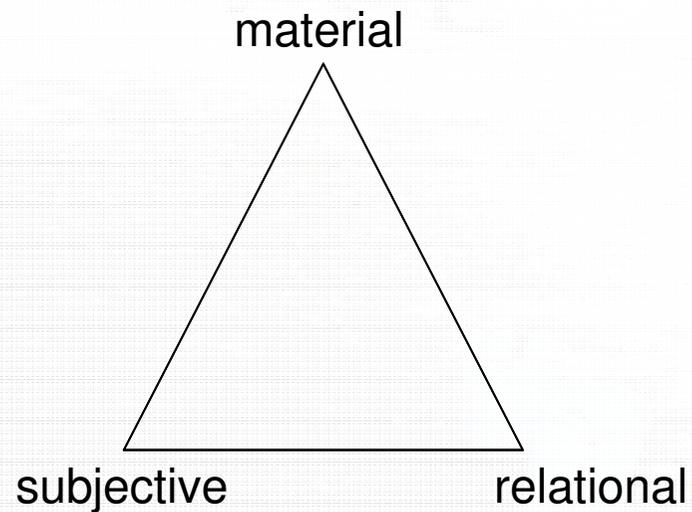


© Hamisi Omari

Human wellbeing

a state of being with others, where human needs are met, where one can act meaningfully to pursue one's goals, and where one enjoys a satisfactory quality of life

McGregor, 2008



White, 2009



© Majimbo Shume

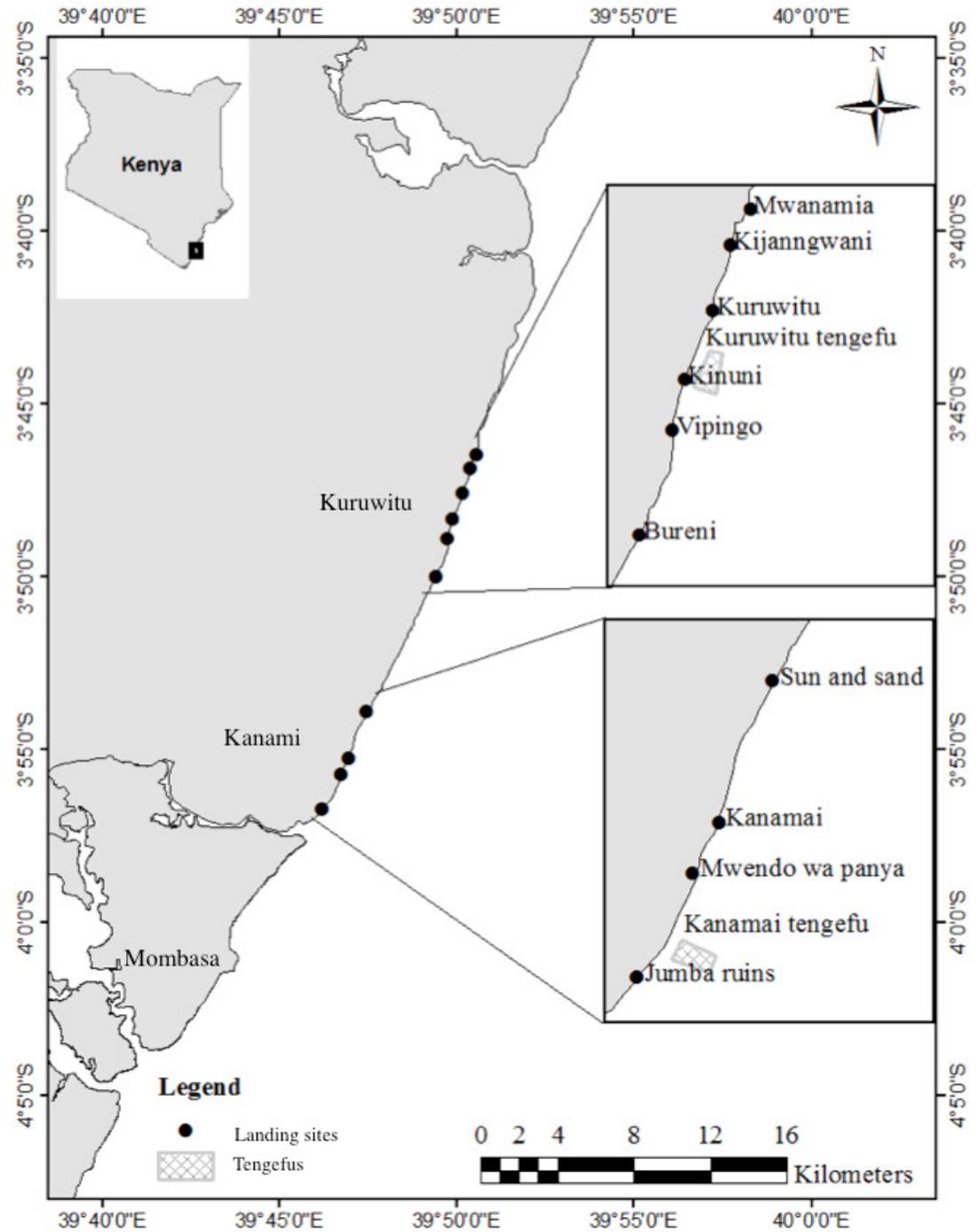
Study sites



© Majimbo Shume



© Fredrick Yaa



Map produced by Pascal Thoya

Methodology

Inductive approach

Mixed qualitative methods

- Timeline focus groups
- Photovoice
- Group interviews
- Individual interviews



Summary of key findings

1. Community engagement and participation during the inception (step-zero), implementation and management of tengefus influences perceived impacts on human well-being and ecosystem services
1. Perceived impacts from tengefus are not just about the fish – they included subjective feelings of inclusion or exclusion, indirect benefits through donor funding, and hopes and expectations about the future
2. Tengefus are often seen as attractors for donor support
3. The ecosystem service lens alone provides a limited view of benefits and costs from tengefus



© Dzengo Chai



© Kahindi Katana

'Step Zero' concept

Chuenpadgee and Jentoft., 2007; Chuengadgee et al., 2013

Kuruwitu

- Significant cross-scale engagement before implementation
- Donor support
- Fewer individuals against the project
- Wealthy resident playing 'bridging' function



Kanami

- Limited engagement with all landing sites
- No donor support
- Many individuals either against the project or unaware of project



© Participant 23, Fisherman

“She is my wife. It is because of the tengefu that I had the chance to complete trainings in first aid and for being a tour guide. That has enabled me to earn some money, enabling me to buy the sewing machine for my wife... At least I have benefited from the tengefu, for even if I fail to come to the beach (to work) my wife can also contribute to family finances.”





Participation and power

Female fish traders are often at a disadvantaged social and economic position, and highly dependent on fishermen for their wellbeing

Matsue et al., 2014

Devolving management power runs the risk of perpetuating existing inequalities

Limitations of the ecosystem services lens

- Importance of a disaggregated analysis

al., 2011

Daw et

- A focus on ES can miss important relationships such as:
 - Conflict as a negative impact
 - Benefits such as donor attraction
 - Ecotourism as benefits to community
 - Subjective aspects of wellbeing



© Katana Nfolla



© Charles Nyale

Issues around community-based MPAs are highly complex and context dependent

Pollnac et al., 2010; Cinner et al., in 2014

So the future of tengefus?

1. Inclusive and slow step-zero phase
2. Participation and engagement from inception to management
3. Consider the role of and expectations surrounding donor support

THANK YOU
ASANTE SANA

