

Strengthening fisheries co-management and biodiversity conservation through Community Marine Conservation Areas, Kenya

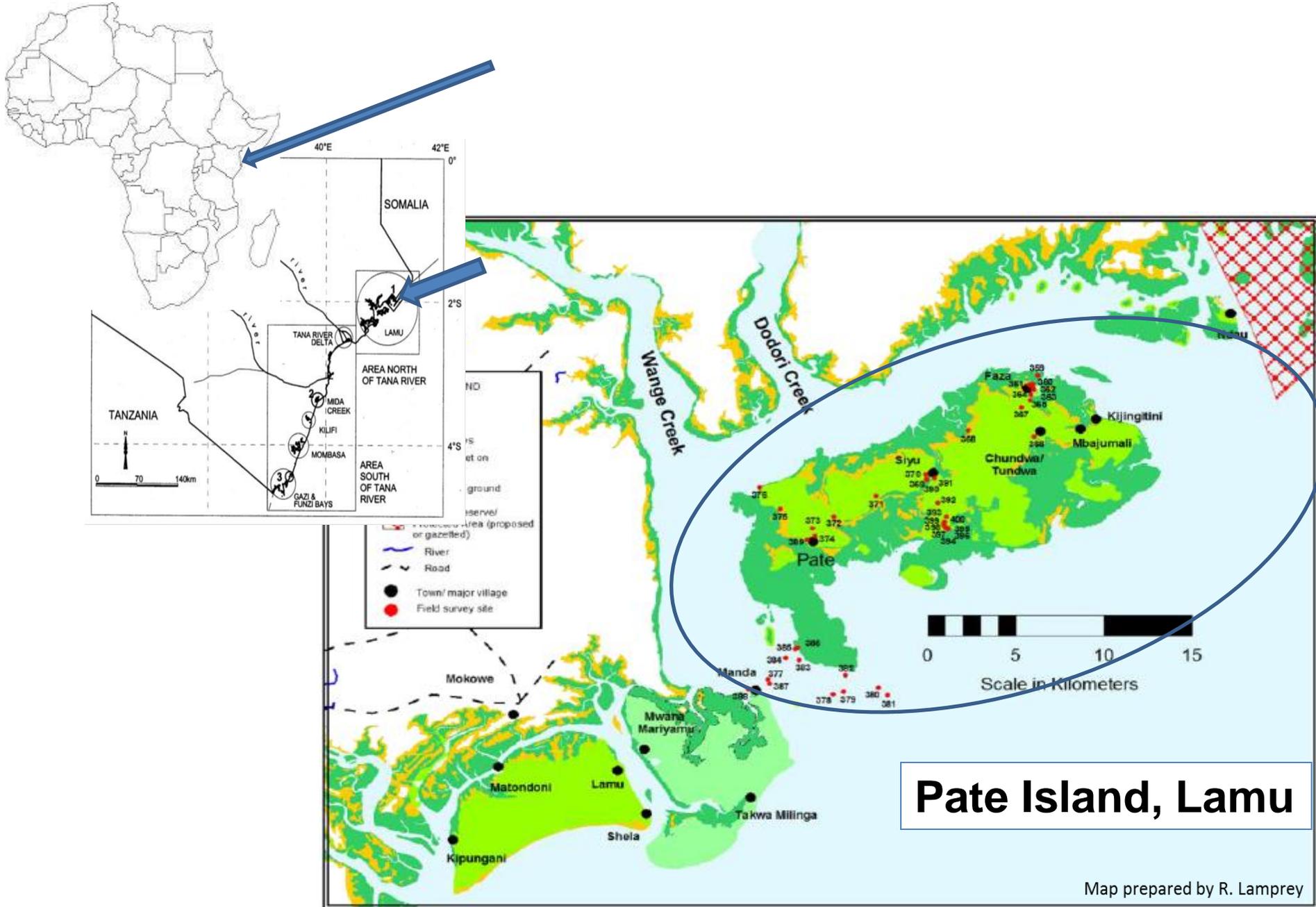


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Location and Type of the fishery and project



Mult gear

Artisanal fishing gears of the Kenyan coast

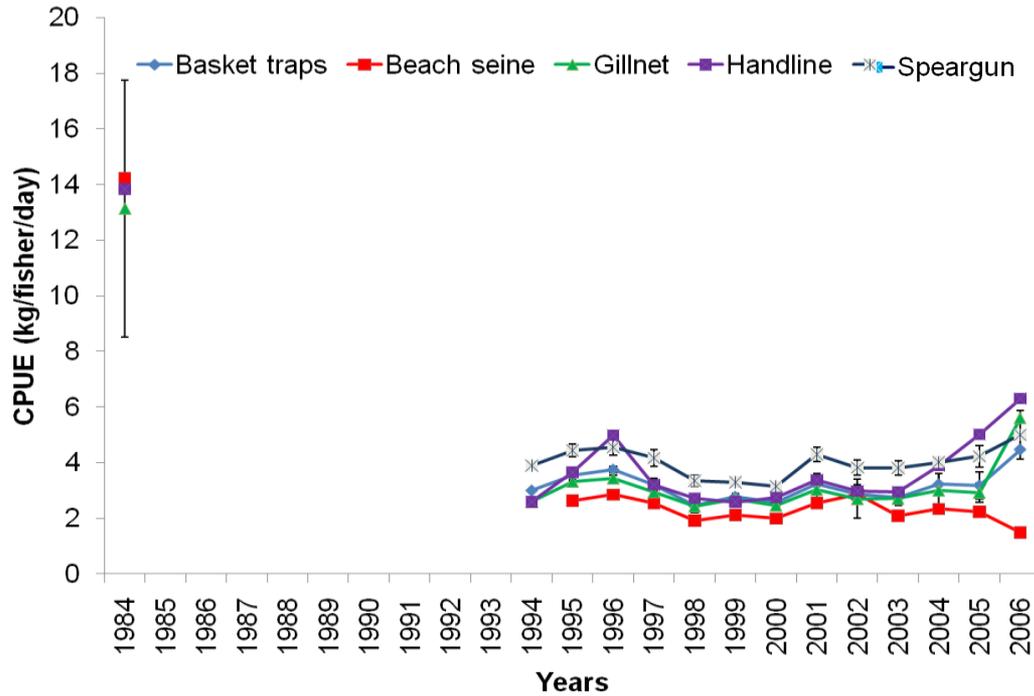


163 species recorded in Kenya coral reef fisheries!

[McClanahan and Mangi 2000]



Fishery catches

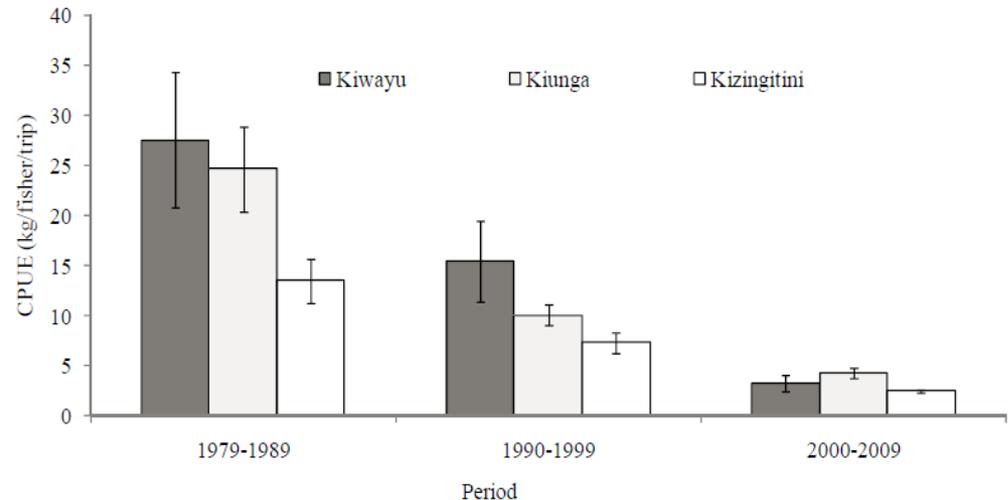


Kenya coast – CPUE

-4 fold decline from the mid 1980s-1990s

-13.7 kg/fisher/trip to 3.2 kg/fisher/trip
constant CPUE since ~ 1995

Samoilys, Osuka, Maina & Obura in prep



Fishers perceptions of lobster catch rates in three villages in Lamu, Kenya

Maina and Samoilys 2010

Lobster Fishery
-Declined
catches over
years to 15% of
1980s levels



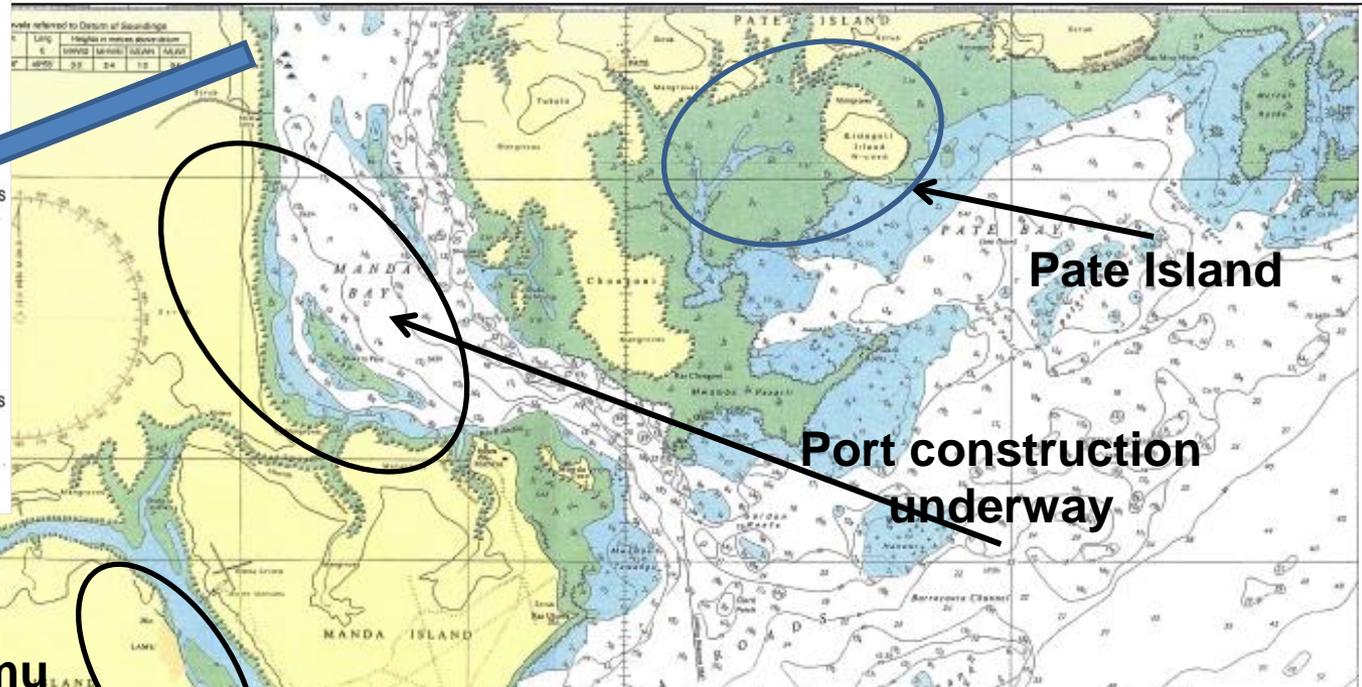
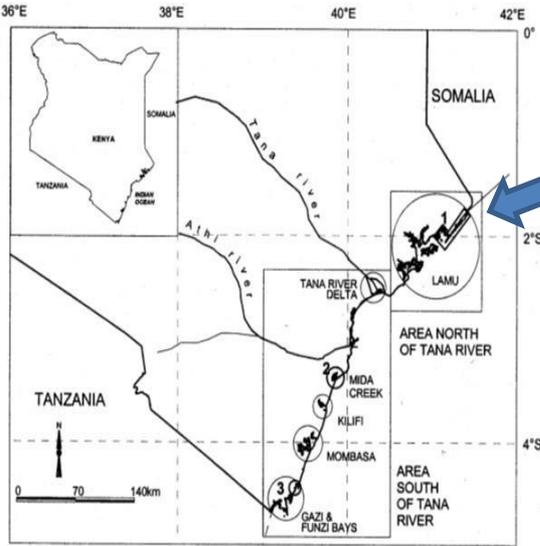
KEY THREATS:

Over-fishing; destructive fishing; Climate change:

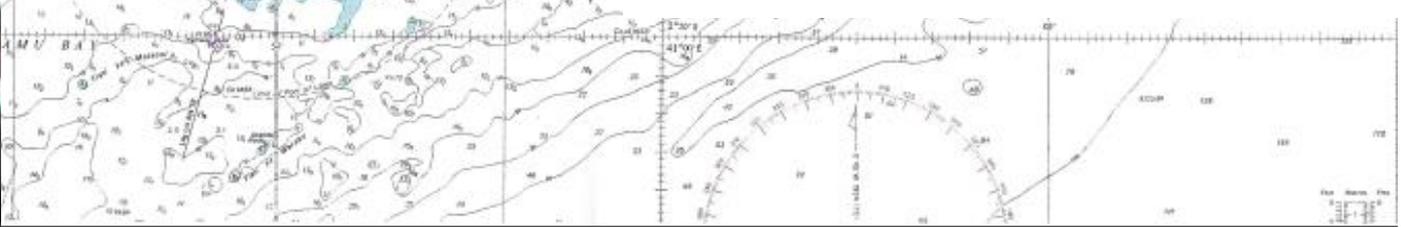


Gear	Mean % juveniles
Traps	44.9
Gill net	49.4
Beach seine	68.4
Handline	55.6
Spear gun	38.2
All gears	50.1

KEY THREATS:



Dredging, maritime pollution
Growing interest in oil and gas
exploration,



Community-Based MPAs in Kenya: Opportunities and Challenges

Kenya's Gazzeted MPAs

Site	IUCN Category	Size (km ²)	Date established	Management type
Malindi	II	6.3	1968	Park
Watamu	II	10	1968	Park
Malindi-Watamu	VI	245	1968	Reserve
Kisite	II	28	1978	Park
Mpunguti	VI	11	1978	Reserve
Kiunga	VI	250	1979	Reserve
Mombasa	VI	200	1986	Park
Mombasa	II	10	1986	Reserve
Diani-Chale	VI	75	1995	Reserve

(Source: IUCN, 2004)

Community-Based MPAs

-Globally, Community-Based MPAs well known from the Pacific, origins in Fiji (1990s) as Locally Managed Marine Areas (Govan et al., 2008; Sivo 2011).

-established to protect biodiversity, ecological and cultural values

-to improve ecosystem health, Habitat and spp protection, reduce overexploitation, livelihood development

Steps taken in establishing Community MPAs



Decision to establish a CCA



Legal and Institutional framework to support CCA establishment



Stakeholder analysis and initial scoping
Socio-cultural and economic assessment
Identification of issues
Basic bio-ecological assessment of the fishery and marine areas



Develop goals and objectives of the CCA



Design of CCA : Location, size, boundaries, activities allowed within it



Preparation of management plan
governance and management structures

Establishment of Community MPAs in Kenya

Conservation initiative	Year formed	Size (Km ²)	Community/ BMU management intervention
1) Kuruwitu	2006	0.29	No take zone
2) Tiwi (Nyari)	2009	0.125	No take zone
3) Msambweni	In progress	0.46	Gear restriction
4) Wasini	2008	In progress	Seasonal closure
5) Kibuyuni	2010	0.275	Gear restriction / no take zone
6) Mkwiro	In progress	0.155	Gear restriction
7) Bureni	2010	0.52	No take zone
8) Kanamai	2011	0.22	No take zone
9) Mkwakwani/Tradewinds	2009	0.118	Gear restriction
10) Shimoni	In progress	In progress	Gear restriction
11) Jimbo	In progress	In progress	Gear restriction
12) Vanga	In progress	In progress	Gear restriction
13) Majoreni	In progress	In progress	Gear restriction
14) Kiweni, Lamu	2010	3	Gear restriction
15) Wasini Women Mangrove Boardwalk	2000	In progress	Managed by women for Eco-tourism.
16) Gede Mangrove Boardwalk	1995	In progress	Community managed - Eco-tourism.
17) Gasi Mangrove boardwalk	1999	In progress	Managed by women for Eco-tourism.
18) Majaoni Youth Mangrove Boardwalk	2003	In progress	Community managed- Eco-tourism.

(Source: Harrison and Laiser, 2009; Murage et al., 2010; Abunge, 2011; Gazi Women Group, 2011)

Community MPAs: opportunities and challenges

- Lack of comprehensive analysis & survey: ecological, socio-economic & environmental conditions
- Community participation in Co-management groups low (Beach Management Units(BMU), Community Forest Associations (CFAs))
- Some community MPAs located within established and gazetted MPAs – conflict with government
- Lack of uniformity in approaches towards creation of community MPAs – standardise tools
- Unfair and non-equitable sharing of benefits.
- Lack of alternative sources of livelihoods; Poaching and insecurity
- Developments: proposed Lamu Port
- Inadequate access to land (squatters)

NEXT STEPS

- 1) Promote establishment of Community MPAs — guidelines needed
- 2) Research: stock assessment, Biodiversity, fishing gears and use
- 3) Strengthen fisheries governance through Fisheries Beach Management Units (BMUs), other co-management structures.
- 4) Support fisheries Value Chain Improvement
- 5) Training and capacity building of fishing communities and stakeholders
 - strengthen understanding of Co-management,
 - Data collection techniques
 - designing and managing community MPAs,
 - Resilience based fisheries management
- 6) Addressing unsustainable fishing; policy and legal frameworks¹²



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