

# Ocean (Coastal/Marine) Accounts for Zanzibar

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# Zanzibar, Tanzania

1.1 million people

3600 marine km<sup>2</sup>

Many rare, endangered species of corals, fish, seagrass, mangroves, and other flora and fauna

World Heritage Site

Low-income country,

Poverty: 50% below poverty line

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## Zanzibar and Pemba



— Railroad  
— Road  
✈ Airport

# Why Ocean Accounts?

Economic growth depends on a healthy marine ecosystem, but—

Marine ecosystem is deteriorating due human & natural causes:

- Uncontrolled tourism development, rapid population growth
- Overfishing & destructive fishing practices, Overharvesting of mangroves
- Dumping untreated wastewater
- Coral bleaching events

Ocean accounts help understand

- What are the economic (dis)incentives for sustainable use?
- How can blue natural capital improve the lives of poor households
- How to reduce conflicts among users of marine natural capital, particularly beach access: Tourism v. Fishing v. Seaweed farming

# Ocean Accounts 1. The macroeconomic view (thousand US\$)

		Share of GDP	Foreign exchange earnings	Employment of Zanzibaris	Share of investment
<b>1. Provisioning services</b>					
	Seaweed farming	0.4%	2,397	16,422	
	Fishing*	6.2%		37,203	1%
	Mangrove harvesting	<0.1%		unknown	
<b>2. Recreation &amp; tourism services</b>		23.6%	184,929	9,351 +	76%
<b>Total value</b>		<b>30.2%</b>	<b>187,326</b>	<b>62,976 +</b>	<b>77%</b>
<b>3. Other ecosystem services, non-market:</b>					
	Education & research Wastewater assimilation, Shore protection	Value unknown but likely to be significant			



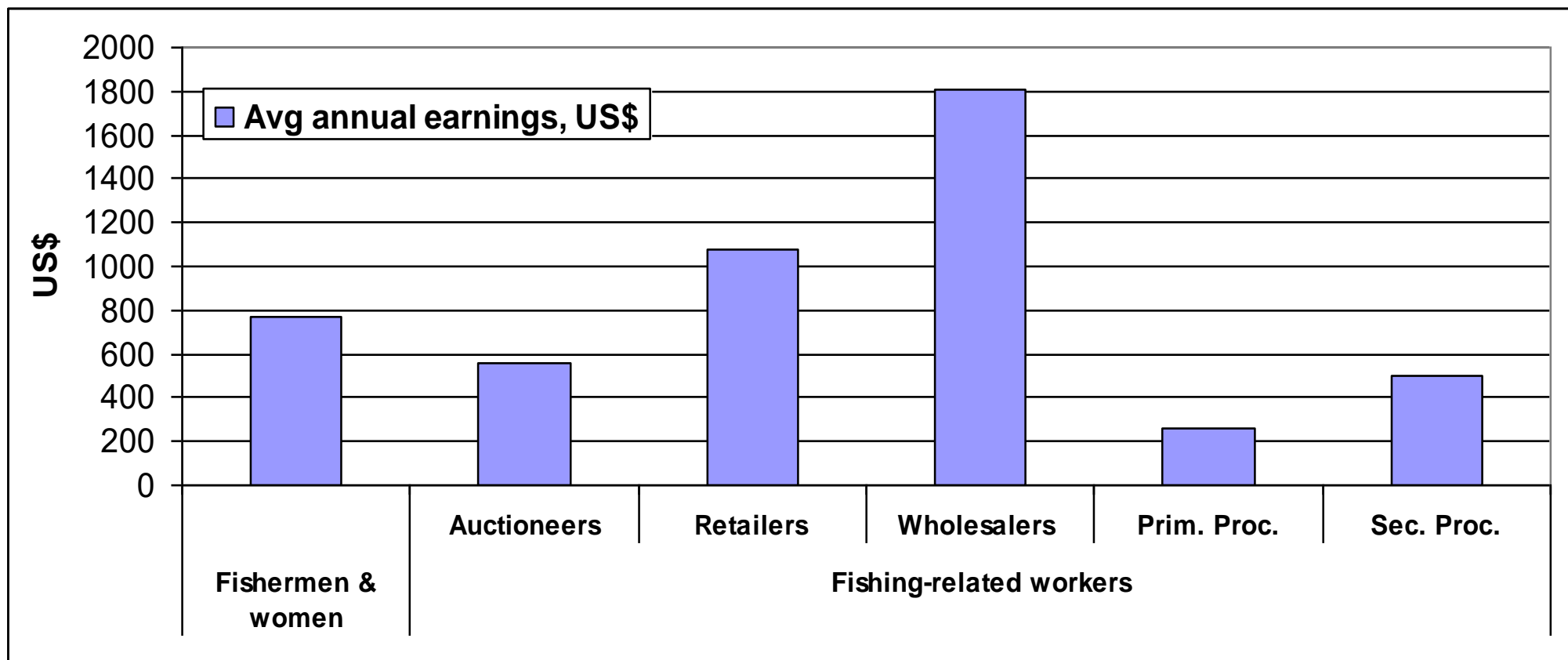
# But to identify sustainable development paths, more information is needed:

## Defining classifications for Ocean Accounts, no assessment of ecosystem health

1. Major economic activities/use of ocean including value-chain activities:
  - Fishing, aquaculture, and processing activities
  - Tourism and related activities, disaggregated into 5 markets identified by hotel type: All-inclusive, Large-scale up-market, Small-scale, up-market, Mid-range, Budget
  - NO DATA for water quality, coastal stabilization
2. Value-added components disaggregated for 5 key stakeholders, important for social & cultural aspects not included
  - Local beneficiaries, rural
  - Local beneficiaries, urban
  - Government
  - Mainland
  - Foreign
3. Spatial classification and units for coastline, in addition to administrative units
  - Sandy beach, Rocky shore, Mangroves, Urban, Estuaries
  - Access of the public: No access, Partially blocked, Full access
  - Confidentiality issues for economic accounts

# Income & employment in the fishing value-chain

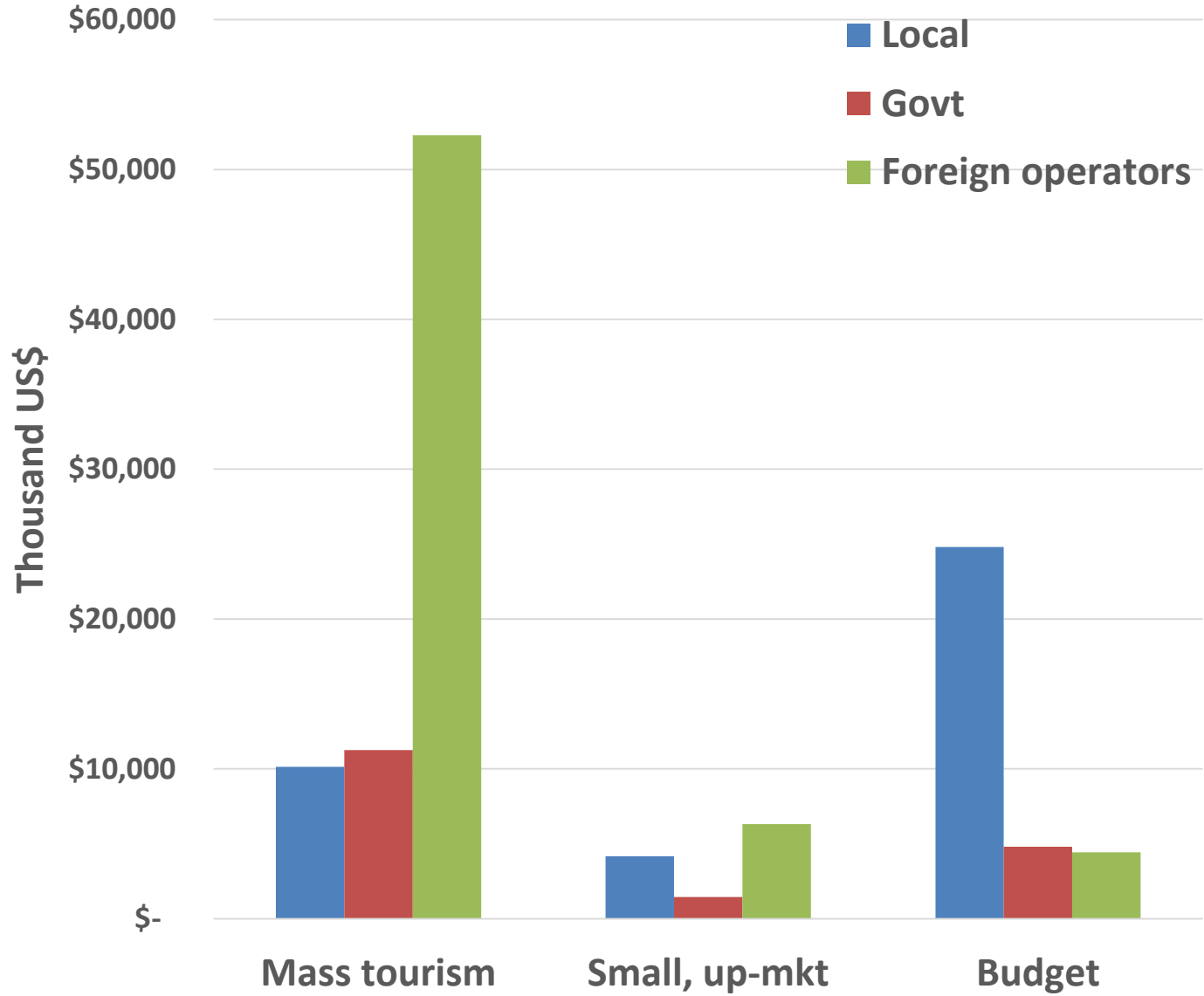
## average earnings



# Who benefits from fishing & related activities? (net income in thousand US\$)

Beneficiaries	Fishing	Processing & marketing	Total
<b>Local stakeholders</b>			
1. Zanzibari villagers	26,223	1,883	28,106
2. Urban Zanzibaris in urban activities	-	1,073	1,073
<b>Non-Local Stakeholders</b>			
3. Urban Zanzibaris in rural coastal activities	-	-	-
4. Zanzibari government	-	-	-
5. Non-Zanzibaris	-	-	-
<b>Total income</b>	<b>26,223</b>	<b>2,956</b>	<b>29,179</b>

# Distribution of net income by type of tourism



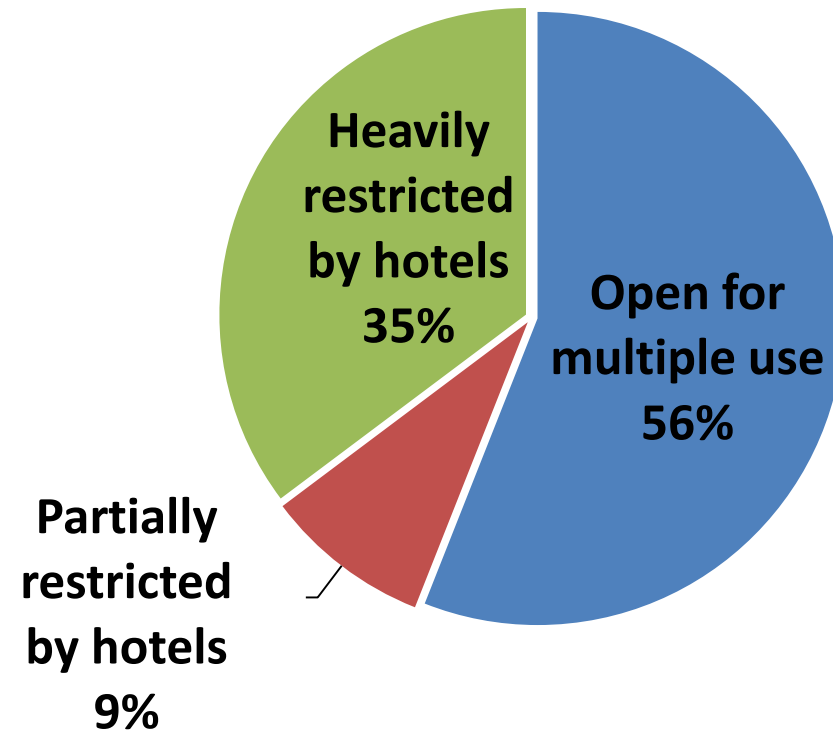


# Contested Terrain:

## Access to sandy shoreline for multiple use: tourism, fishing, seaweed farmers

Length of sandy  
beach: 109 km,  
26% of total coastline

Share of sandy  
shoreline by degree  
of access for multiple  
users



# Lessons for ocean accounts

Many policy lessons, but not all taken up, for example

- Aquaculture expanding, Local Marine Mgmt Areas more effective than MPAs
- Tourism expanding but not focused on type that benefits local communities

Critical data missing, for example

- Wastewater and pollution, solid waste management

But more spatial info available now to improve ocean accounts

- link activities to health of coral reefs, fisheries, broader ocean health

Ocean accounts don't need to include everything, but can link to other information!

- Link to social and cultural impacts to complement ocean accounts

# Thank you!

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