

The total economic value of small-scale fisheries with a characterization of post-landing trends: an application in Madagascar with global relevance

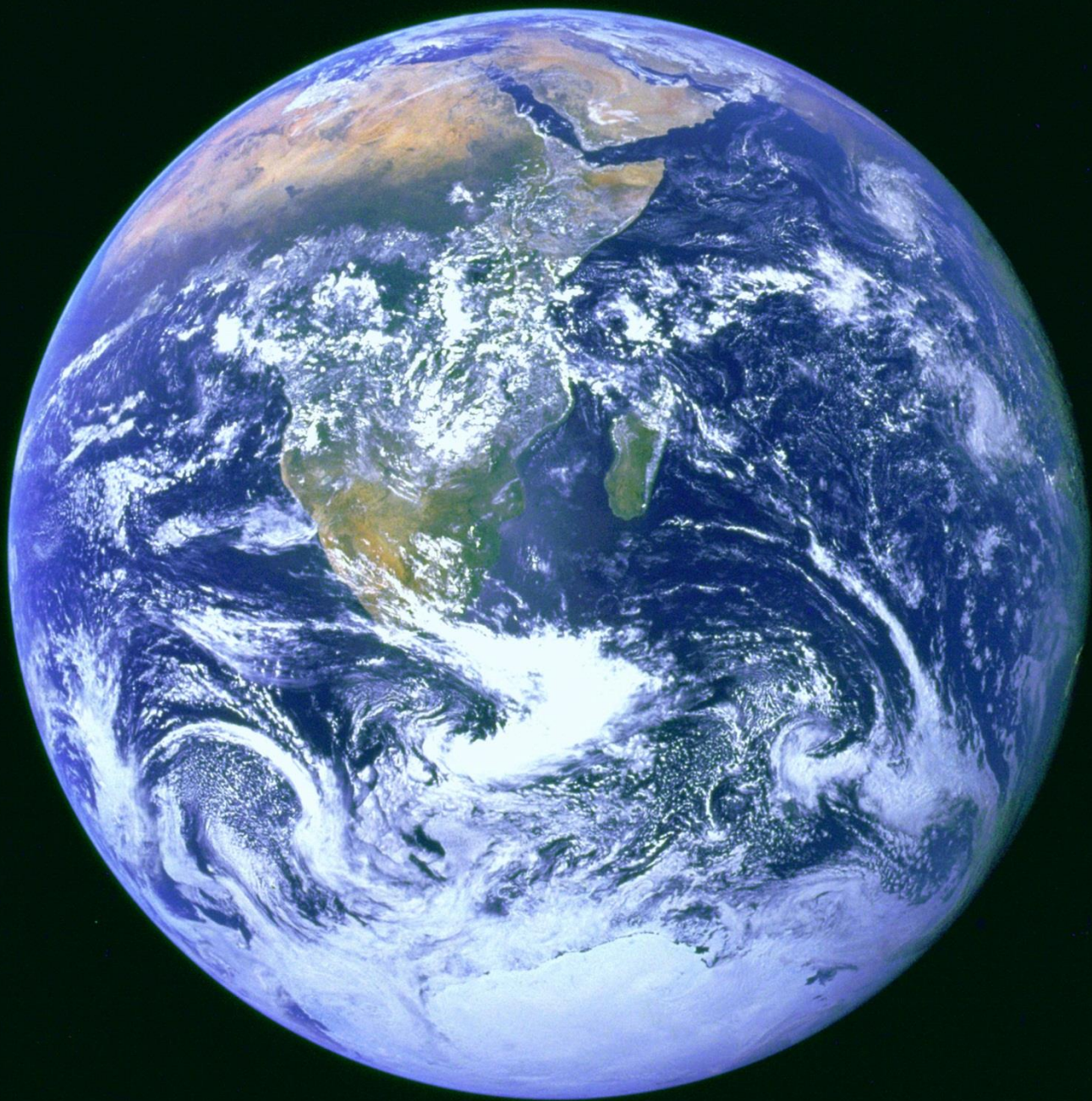
blue ventures
discovery through research



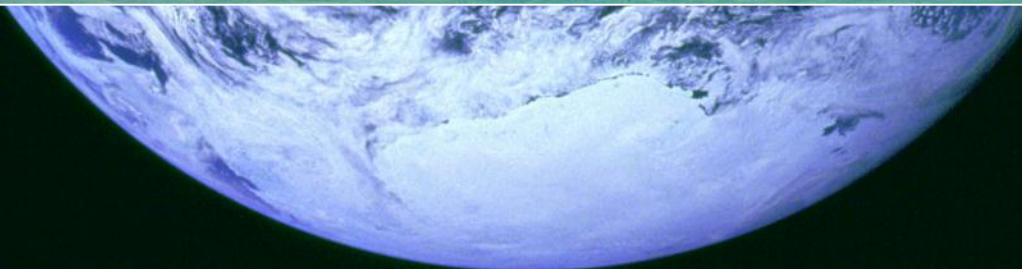
M Barnes-Mauthe^{1*}, KLL Oleson^{1,2}, and B Zafindrasilivonona²

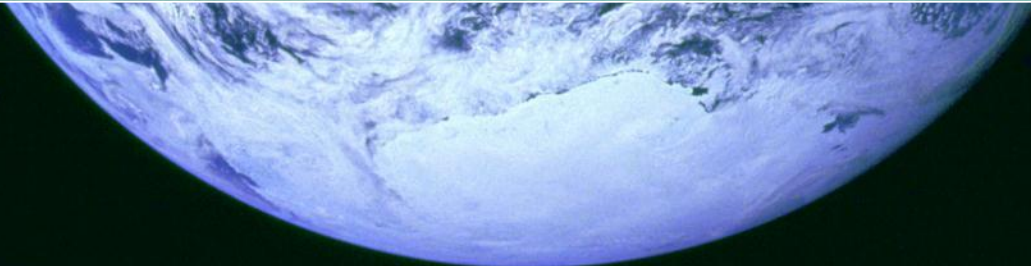
¹Natural Resources & Environmental Management, U. of Hawaii, ²Blue Ventures

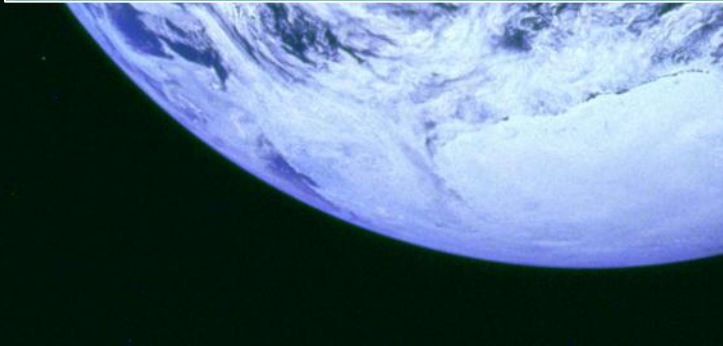
IIFET 2014, Brisbane Australia





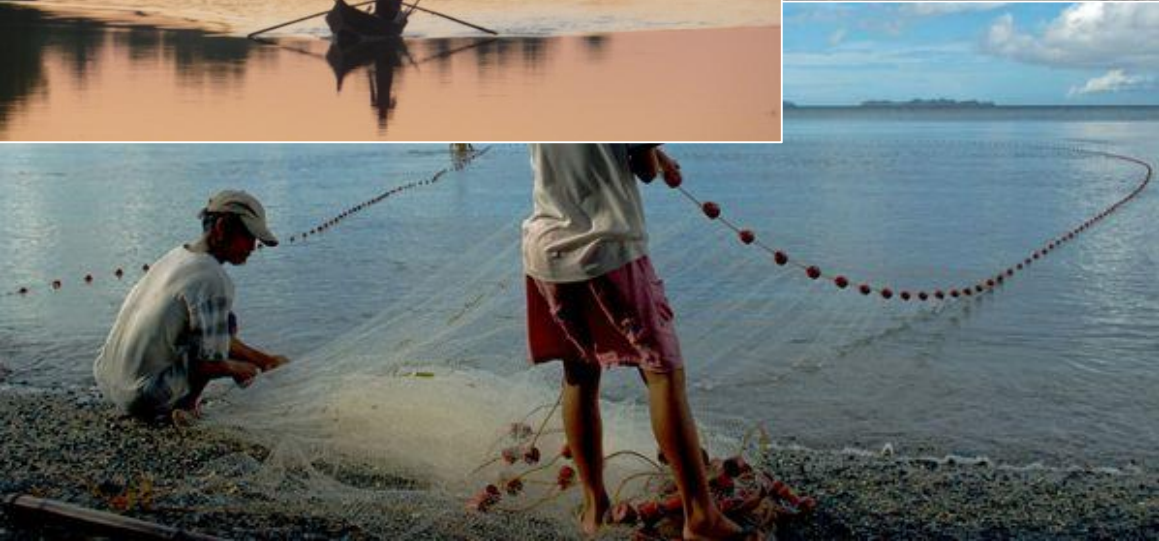


























Locally Managed Marine Area



© 2011 Google
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US Dept of State Geographer

“To Live With The Sea”



50 Km



24 Villages
7,561 People



The Vezo

olo mitolo rano sy olo mipetsaky andriaky

people who 'struggle with the sea and live by the coast'

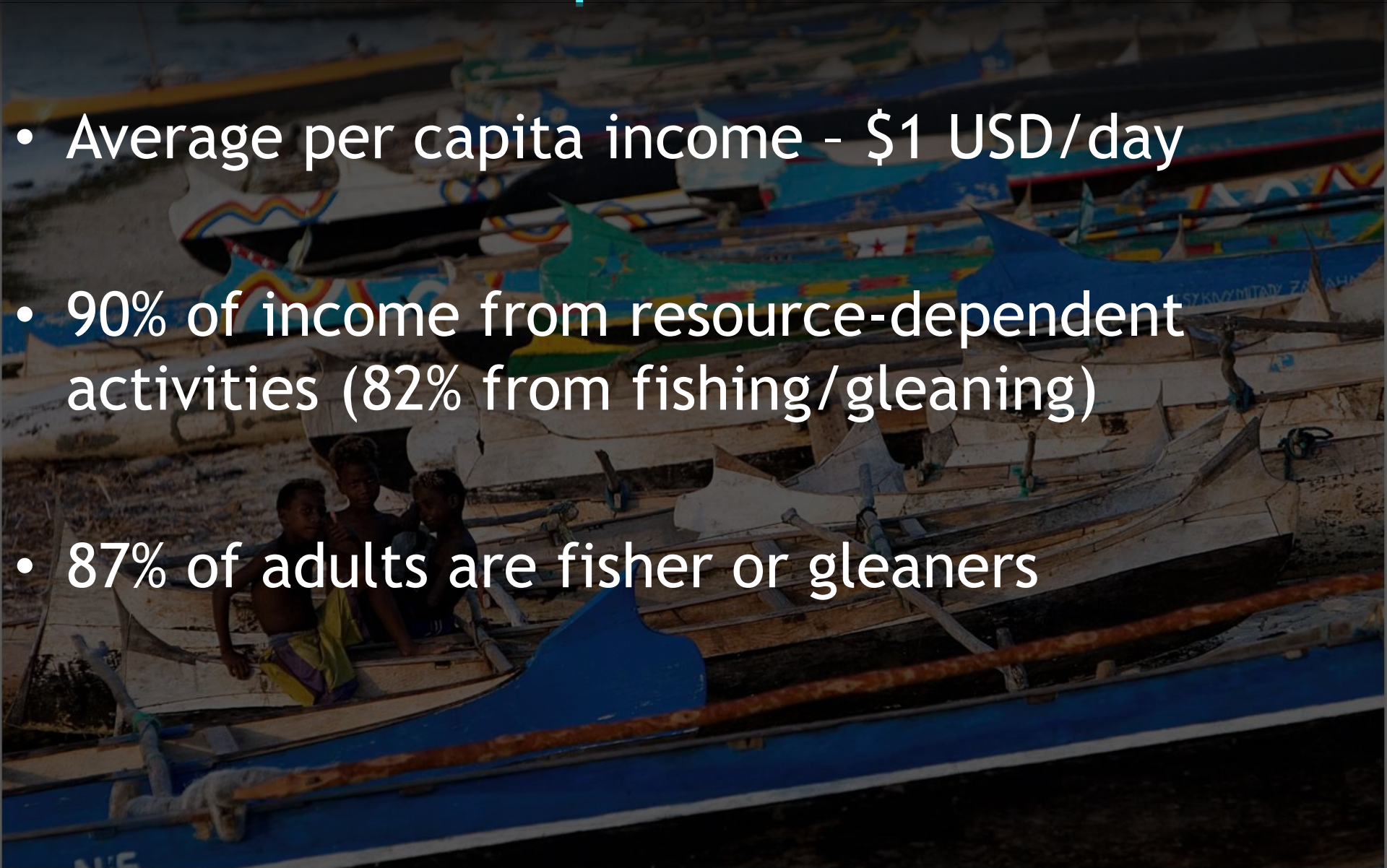
- Astuti (1995)

Severe Poverty and Resource Dependence



Severe Poverty and Resource Dependence

- Average per capita income - \$1 USD/day
- 90% of income from resource-dependent activities (82% from fishing/gleaning)
- 87% of adults are fisher or gleaners



Methods



Key Informant Interviews

N = 26

Household Survey + DCE

N = 301 + 301

16 villages (of 21)

stratified (geographic & habitat)

random household

representative respondents (age, sex)



Focus Groups

N = 7



Fisher Survey

N = 156

stratified (gleaner, fisher, fisher-gleaner)

representative respondents (age, sex)

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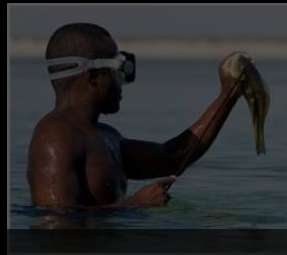
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Methods

1. Characterize Fishing Methods, Habitat Use & Catch
2. Construct Annual Landings
3. Determine Post-Landing Trends
4. Estimate Fishing Revenue, Total Market Value, Net Income & Profitability
5. Determine Dependency on Small-Scale Sector

Results

5524 metric tons (t) extracted in 2010

Primarily from Coral Reefs

TEV = USD \$3.4 million

83% sold commercially

Revenues = USD \$2.9 million

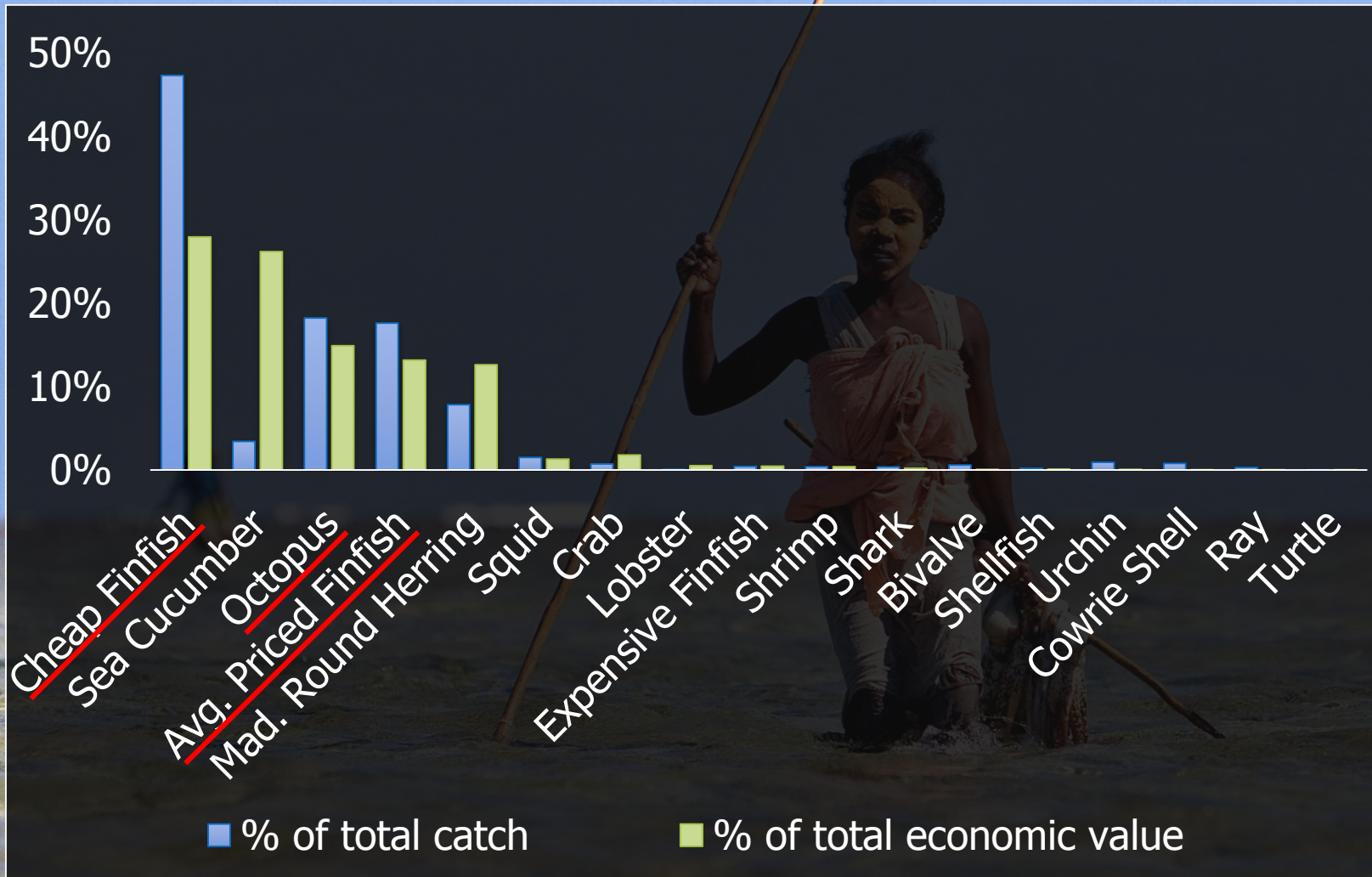
Employs 87% of population

Generates 82% of income

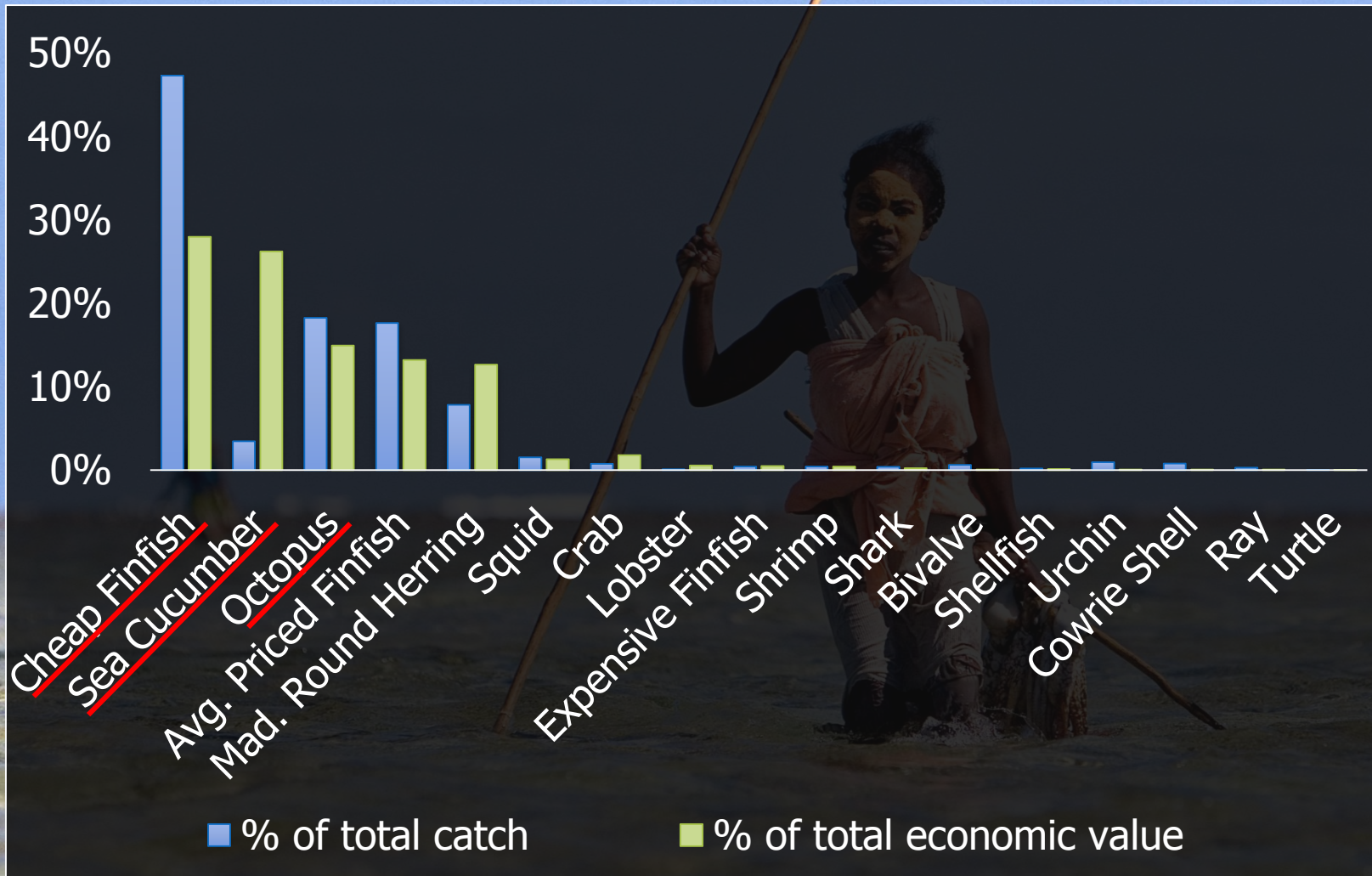
Sole source of non-rice protein



What Type of Fish is Caught?

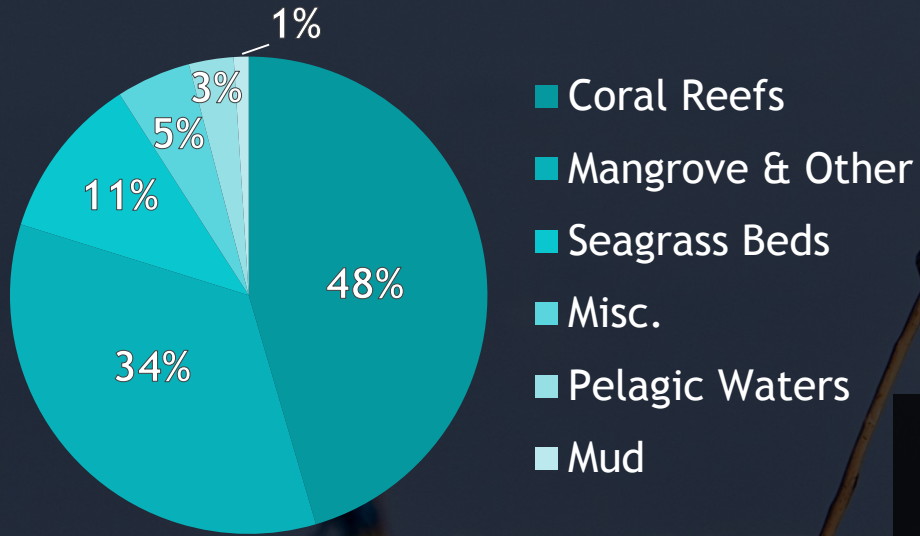


What's the Most Valuable?

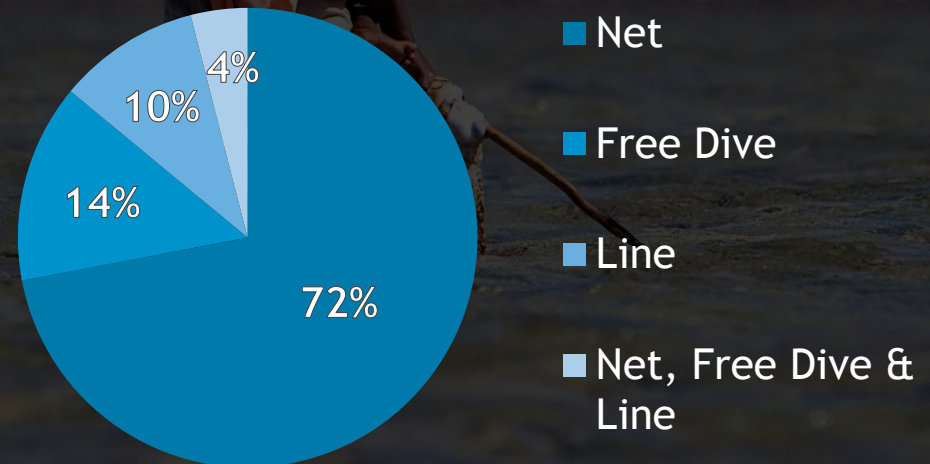


Where, and With What Gear?

% of fish catch by habitat



% of fish catch by gear type



What's eaten? What's sold?

Total Sold (by volume): 82%

Primarily Sold

Sea Cucumber (100%)
Octopus (100%)
Crab (100%)
Lobster (100%)
Mad. round herring (94%)
Shark (89%)
Shrimp (88%)
Finfish (~80%)
Squid (72%)

Primarily Consumed/Shared

Bivalve (92%)
Urchin (89%)
Shellfish (87%)
Turtle (69%)
Ray (68%)

Still, **finfish** most importance
source of local protein

So...?



Small-scale fisheries are crucial for supporting livelihoods, and their economic value is anything but small.



Policy Implications



\$



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\$\$

It was previously assumed that **octopus** was the most economically valuable species, but our results suggest that both **finfish** and **sea cucumber** generate greater revenues yet catch levels of both have been declining

Policy Implications



VS.



The small-scale fisheries sector in this single 1000 km² region of Madagascar is at least $1 \frac{1}{2} \times$ as valuable as the total annual revenue Madagascar earns from concessioning its EEZ to EU tuna vessels
&
 $\frac{1}{6}$ as valuable as the country's entire domestic shrimp industry

For More Info...

Fisheries Research 147 (2013) 175–185



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Not so small after all – exposing the true value of tropical ‘small-scale’ fisheries

The total economic value of small-scale fisheries: characterization of post-landing trends with global relevance

Michele Barnes-Mauthe^{a,b,*,1}, Kirsten L.L. Oleson^{a,c,1}, Bienvenido

^a Department of Natural Resources and Environmental Management, University of Hawaii at Manoa, 1950

^b Joint Institute for Marine and Atmospheric Research, University of Hawaii at Manoa, 1000 Pope Road, Honolulu, HI 96822, USA

^c Blue Ventures Conservation, Lot VC 73 Ambatonakanga, Antananarivo 101, Madagascar

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ABSTRACT

Small-scale fisheries make key contributions to food security and livelihoods, yet to date the economic value of small-scale fisheries has been underestimated. We take a novel approach to estimating their total economic value (TEV) by combining data on the value of the catch with data on the value of the ecosystem services provided by the fishery.

FEATURED ITEMS

Home / Markets and Value Chains / New study highlights the importance of small-scale fisheries

New study highlights the importance of small-scale fisheries

Globally, small-scale fisheries provide livelihoods for over half a billion people; 97% of the world's small-scale fisheries are in developing countries.

Island stress

Overfishing and destructive methods are threatening the island nations's coastline

by Annelie Rozeboom
Feb 01, 2014

Annelie Rozeboom is a Dutch journalist and author.



Economically Valuable

Though often overlooked and undervalued, small-scale fisheries make key economic contributions and are overwhelmingly important for coastal communities

Small-scale fisheries are not so small after all. In a remote, rural, locally managed marine environment, the economic value of small-scale fisheries exists on the worldwide scope and impact of small-scale fisheries. We, therefore, can only guess at the

Misaotra bevata!

(Thank you very much)

blue ventures
discovery through research



M. Barnes-Mauthe: barnesm@hawaii.edu

K. Oleson: koleson@hawaii.edu

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wonderful photos*

Network
for Social
Change

MacArthur
Foundation


the waterloofoundation

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